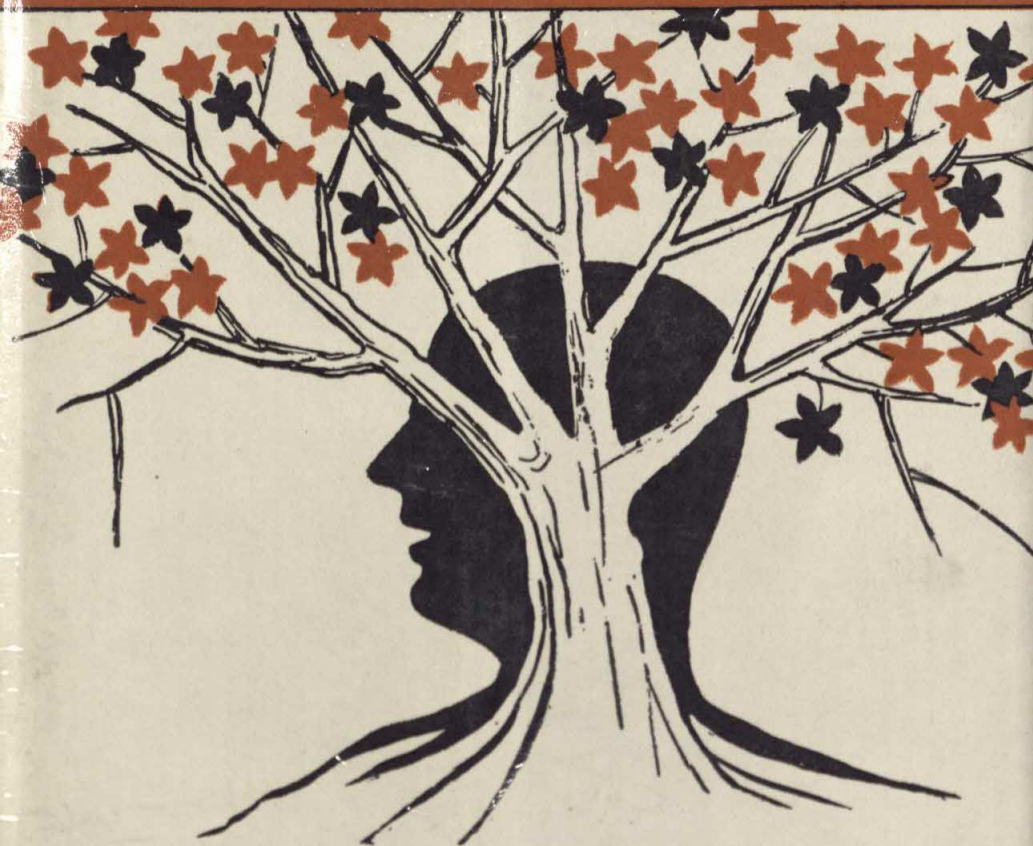


PERSPECTIVES IN
EDUCATIONAL
PSYCHOLOGY



S.B. KAKKAR

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Preface

This book was inspired by many questions that my students asked year after year regarding the fundamental concepts of education, psychology and educational psychology. Most of the selections were familiar readings in my classes, and were chosen because of positive student response. If a student conveyed the feeling that he or she had gained something directly from a paper, or that a paper had provoked him or her enough to instigate new thinking, I had the feeling that this would be the paper I would include.

At the outset I was confronted with two problems: first, which papers, of the vast array that I wrote and published in national and international journals, should be omitted (owing to space limitations); and second, how should the book be organized. The first problem was annoying; for it impelled me to cut out many valuable contributions. The second problem was doubly perplexing; for so many of the papers could so easily fit into more than one part of the book. Ironically, it was in solving the second problem that I learnt how to solve the first. Let me elaborate.

As I read over the whole lot of papers I had been using in my classes, I found that many of them combined in a unique way several of the important topics. Though we as teachers have a tendency to impart a thorough understanding of diverse material, treating each material as a separate topic, I think we have the responsibility to put together diverse elements rather than presenting them in their fragmented form. Once I reconciled myself to this position, everything began to fall in place. Instead of relying on the conventional organization, which goes with the textbook, I organized the book in such a way that the reader would be able to follow the detours and challenges inherent in all educational endeavours. Nevertheless, to avoid confusion I have used each part to organize the articles included within. The reader will find that the structure of the book in many ways reflects the structure

of experience with which we come to teaching and from which we grow.

Part I offers a tentative conception of education and its aims, which will be central to much of our thinking throughout the rest of the book. Part II deals with modes and media which are currently used to negotiate the educational process and to make learning and teaching effective. In Part III, the author builds up the case for each of the spheres of education that we cater to. Part IV presents interesting and moving accounts of human psychology behind human behaviour, unfolding the unrecognized and untold rationale of what we are, what we nourish or have, and what we do. In Part V, are included the global conceptions of the goals and strategies of teaching, the most effective methods of teaching, and some refractory questions that have troubled educators over the years on what teaching really is. The purpose is to help the neophyte teacher see that becoming a teacher means learning to think in an entirely new way, being willing to deal directly with some very difficult questions, committing oneself to one position or another. Finally, we come to Part VI, some, not all, issues that educators are still debating. In this part lies a very important and difficult area, that of learning which in fact determines the nature and quality of education, the role of the teacher, the process of teaching, and above all, our understanding of the learner, in his or her complexity.

With this introduction we peep into educational psychology, armed with questions, looking for answers, filled with hope and promise. How the book will change the readers' thinking and the consequences of such changes on every learner cannot be surmised. Let the readers, like Sir Issac Newton, attempt to discover in their own ways "the great ocean of truth that lay all undiscovered before us."

Acknowledgements are gratefully made to the publishers and editors who found place for the papers included in this volume in their esteemed journals.

S.B. KAKKAR

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I

WHAT AND WHY OF EDUCATION

1

Why Education

If man could whirl round the formidable wheel of life without getting stuck at any obstacles, if he has no one to compete with in this task, if it costs him no penny, and last though not the least, if he could live and let live while the whirling was on, he would perhaps require no education. The 'ifs' having blocked his way, man is left with no alternative other than that of preparing himself to rise equal to the occasion. This sole alternative irrevocably lands him in the school, there to educate himself, and hence education.

Since it costs him to live a life, he must earn, which he can do through a vocation. Vocation in its own right also is important for him, as it satisfies his developmental need, and is identified with his self-concept. Education inevitably precedes vocation. So he must receive education, firstly, because it is utilitarian, and, secondly, because it solves his economic problems.

To live and let live, man needs to be a citizen of a democratic social order; he must as such know his duties besides of course his rights. The present day education intends making him so. Consequently, he must imbibe education, because it prepares for good citizenship and is on that account essential for the survival of the state and society.

Again, man cannot get along alone, he, being by nature social, and the people he is to co-exist with being socially mobile. Education invariably offers a curriculum meant to socialize him. So education

he must have, because it is a social asset, and it enables him to share the blessings of companionship.

Life, being what it is, offers no smooth sailing. Its difficulties cause man to stumble and stand as a rock in his journey through life. Knowledge and experience gained through education enable him to face these difficulties. Thus education is his need; lastly, because it is his saviour, it makes him survive all shocks.

The foregoing argument smacks of what an idealist might name as the material purposes of education. "Why not educate man as man?" is what the idealist suggests. In fact, notwithstanding what has been attributed to education as above, good education has attempted, as it always does, to 'educate man as man'. It does not, nor it should, elude recognizing the ideal genius of man while it serves him.

Too often education gives an unbridled impression that it does not serve mankind. Several factors, and not education as such, warrant such an acrid impression. The quality of teachers or, to go still further, inept teacher-training may be the most important of the factors. What sort of teachers we produce would ultimately determine what sort of education we impart.

The type of the taught the schools are faced with also matters, especially when all types of the taught are entitled to education. There are children who do not want to learn even when they can, or who cannot learn. Evidently these children are a costly liability to the school. They are most likely to cast a slur upon education and upon what it is meant for. On the other hand, there are those who want to learn, no matter whether they can or sometimes cannot learn. They are the ones who glorify education.

Education implies learning, which the school so nobly institutes. Learning is made possible and easier by the school, but the school cannot assume full responsibility, partly because many other avenues of learning are simultaneously available to the child, and mostly because the school is always exposed, as it naturally should be, to the moral climate of outside forces. It is therefore imperative that school and community join hands to create such conditions as are conducive to more and better learning.

A respect for learning for its own sake and not because the school provides it must be developed in the child by the home and the community. A child nursing this respect is bound to learn.

The will to learn and a capacity to do so will make the child learn and the teacher teach most joyfully. Good teaching is another requisite on which learning depends. The teacher's job is not to take charge of the child for the time he is out of home and to protect him, nor be just a master of his subject. He must be able to kindle the child's mind with a light, to excite his imagination and to provoke his thinking. If he has insight enough to focus the child's self, unforgettable learning is bound to take place. Finally, learning is sure to occur, if it is about things significant, which it would be, if the teacher is seized of the nature of the child being taught and the vital purpose of teaching.

Posed with a threat of being wiped out through nuclear armaments so ingeniously devised by man, but with a much greater threat menacing him from within, the threat induced by spiritual and moral impairment, man is bordering on neurosis. He must look within to ward off the threat from within and that from without. To look within he must absorb into himself the well-tried wisdom which could provide refuge to his tottering soul. For achieving this great wisdom, man is at the mercy of education, and still more at that of the teacher who disseminates it.

2

Education For Excellence

"Education should be remodelled," "Renew Education," "Make Way for Renaissance in Education," are slogans of the past in today's world when what is needed is education for excellence, education to equip the young to live and function in this fast-changing world. The new educational system should consist of only those elements of education that have proven to be important for a functioning, performing individual.

The present educational system where, through vertical transmission, the tried and the true is passed on from mature teacher to immature student, must give place to education in which what has just been discovered or invented or created is passed on laterally to every satient member of society. Such lateral transmission is based upon the hypothesis that education is fluid and ever-changing. Our educational goals, therefore, should aim at equipping the young to live in a world that will be almost completely different from the one we inhabit—a world, where the key to success will be the ability to change, to be flexible, to be the possessor of tools and skills, to be able to apply these to a variety of tasks, to be the decision maker, to be the controller of one's destiny, to approach the world through a completely different network of communication systems, and, perhaps, even to be prepared to view this world from another planet.

Similar views have been voiced in Margaret Mead's (6) call for education ahead, Gardener's (2) "many kinds of excellence", Jennings' (5) "greatest dream," Whitehead's (11) comments "the rate of progress is such that an individual being of ordinary length of life will be called upon to face novel situations which find no parallel in his past," Peter Drucker's (7) words "since we live in an age of innovation, a practical education must prepare a man for work that doesn't yet exist and cannot be clearly defined", Silberman's (9) saying "six-year-olds now starting school can expect

their vocations to change three times during their lifetime," and Thomas Mann's (10) remarks "the scientific or literary well-being of a community is to be estimated not so much by a few men of great knowledge, as its having many men of competent knowledge."

As many as sixty million jobs will change in character in the next generation. Skills will obsolesce and facts will wear out at a very rapid rate. In fact what will be most worth learning will be the ability to learn. It is this ability, which the proponents of intelligence attribute to heredity, that the future man must possess.

Our education would be all-inclusive, and we would produce many men of competent knowledge. European concept of selective education will become a thing of the past. To design educational programmes of this nature on a large scale, we have borrowed from industry the techniques of mass production. Thus we mass produce students and scholars, but in the process deny them their individuality. This happens, perhaps, because the industrial model does not work in education as industry's main goal is the profit motive while education's it is not. And since our goals are different, the methods to achieve them should not be the same. Actually, however, our failures in attempting mass education may be due to another reason, and that is that educators actually have not adapted industry's techniques to education's needs. Education has failed probably in the fact that, unlike industry, it does not think in terms of the consumer. Industry, with the profit motive in view, cares about the consumer; while we in education, with our noble, more lofty and certainly purer goals in mind, do not care at all about our consumer, the student, the individual who is unique and distinct in his own right.

Evaluation in terms of consumer's satisfaction with product is constantly done by industry. Its product is tested, modified, again tested, advertised, consumer's reactions to it obtained, costs settled, tested and modified again. If, as educators, we use this process with our consumer, the student, we would learn that we have, not one consumer or a few consumers, but as many different consumers as we have students—a fact that we educators have still not learnt. Had we learnt it, we might have given far more attention to educating the individual instead of just giving information to a mass of students as we are doing heretofore. T.S. Eliot hints at this hiatus in education when he asks such questions as "where is the life we have lost in living," "where is the wisdom we have lost in knowledge," "where

is the knowledge we have lost in information." Each learner must be reckoned with if we mean to give true education.

We must view each student as an individual and help him in the fulfilment of his abilities, aspirations and interests. Yet education has made very little provision for the individual to fulfil his abilities, to create for himself new abilities, to reach beyond his grasp. Robert Glazer (3) points out individual differences and learning treatments as also three methods of dealing with individual differences. First, standard curriculum, symbolising fixed educational goals, is set, and the student who does not make it is dropped along the way. This system is still prevalent in European education and in most of the school systems including the one in our country. Second is to determine for each student his prospective future role and provide for an appropriate curriculum. This is a more enlightened method of dealing with the individual student which is being practised in some American schools today. Students are channeled into academic courses, vocational courses, or home-making courses on the basis of their abilities and aptitudes. A serious limitation to this approach is, however, the instrument or decision-maker. How accurate is the test or the teacher or even a combination of both! A child may be placed in the wrong track because of improper guidance, and once there, there is no going back. Although most schools promise mobility when necessary, rarely is a student moved from a vocational track to an academic one, from a lower track to a higher track, though sometimes there is a movement in the reverse direction. The third pattern is a sophisticated system of diagnoses of the students' individual differences and the prescribing of individual instructional procedures or treatments on the basis of these diagnoses. This pattern helps the learner to reach not only his potential, but to reach beyond his grasp, for the length of grasp of one child may be more or less than that of another, and the object for which one reaches can be very different from that of another. This pattern seems to promise most in the matter of producing men who can function effectively in this highly dynamic world.

Individual differences among children are best learned by teachers coming into close relationship with their students, rather than by subjecting children to tests. Martin Buber too is of the belief that the teacher should enter into the life of the child and know about his needs and capacities in the common situation of

educating and being educated. Thus, in designing any educational system, the opportunities for human contacts should be in-built. Let humanistic values guide scientific and technical abilities.

Thus, to be able to concentrate on the uniqueness of the individual in an ever-changing world, we have to seek far more from education than could be offered by the schools alone. Both Plato and Jefferson (4) wanted the entire community to educate saying that public education is only a minor part of the education of the public. This brings us to such questions as "when should a child's education begin", "how long should it continue", "how should we educate", and "who shall educate."

A child's education should begin with the education of his parents, before he is born, and should continue for as long as he wishes, for man never completes his education. Even today we recognize the concept of continuing education. This, formerly, meant that an individual had the obligation to continue his personal development on his own. But today it means that he should be able to find a formal educational design available to him. This design is meant to prepare him to avail of new opportunities or to enter a new course of education, and to develop the adaptability of mind and talents that our fast changing society warrants.

Compulsory education was instituted to prevent the exploitation of child labour; this scheme is no longer necessary. Nevertheless, education is always desired, not compulsory. An argument is advanced that students "drop out" and that compulsory education alone will prevent this malady. Educators by now have known that if a student "drops out", then the educational programme has failed for him. Keeping him in by law will not stimulate him towards achievement, but an educational programme suited to his needs and abilities will. A student drops out of an educational programme that has no meaning for him, but can drop into one that fulfils his needs. He does not drop out for any other reason. In fact, the society today can afford no attrition, as otherwise it would produce men too disabled to meet the formidable realities of life.

The school alone will not be able to educate, but the total community will. The school as such will be just one small source of education; student will move from school to museum, to theatre, to hospital, to factory, to court, to college laboratory, to city hall, to parliament. The educators will be the teacher, the curator, the artist, the medical man, the industrialist, the lawyer, the researcher,

the politician, and the computer. The child will become truly a social man, educated by the organized contribution of all these agents of education.

The children will be subjected to a range of formal and informal education that did not exist in the past. They will spend their whole lives in learning, not essentially in classrooms. Enjoying the wisdom, the art, and the experience of other ages and other peoples in their homes, they will, outside their homes, absorb the training extended by pre-school learning laboratory, art museums, community science centres, public television networks, vocational training centres, research laboratories and industrial plants. Cremin (1) is of the view that education is the product of totality of such impacts upon an individual.

The challenge to education is thus to prepare the next generation for a different and more complex world than the one in which we live today, a world in which every individual, in order to survive, will have to develop a high degree of uniqueness so as to reach beyond his grasp. This essentially warrants a slant towards individualizing education with a view to expanding the individual's mental horizon as also his other capacities to a degree unparalleled in history. Margaret Mead (8) calls for education for rapid and self-conscious adaptation to a changing world, for no one will live all his life in the world into which he was born, and no one will die in the world in which he worked in his youth.

The industrial revolution humbled the physical skills of man. The technical millennium that has overtaken us in the last decade threatens to humble the human brain, not only in its simpler and more routine functions but even in its larger and vital decisions. Just as the skilled mechanic, the skilled shoe-maker, the skilled mason have in some degree survived the industrial revolution, the skilled intellectual or administrator may survive the technical millennium that has set in. For this, education must make provision for the escalation of the adaptive qualities of man and for survival. How should education do so remains to be seen.

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3

Education—A Social Process

EDUCATION is essentially a social process, both in principle and in method. It is social in principle because it takes place in a group, and in method because the teaching-learning situation must be related to life. The teacher deals with a group of children who have common aims and purposes. He knows that to impart education effectively the pupils must be moulded into a unit, for learning cannot be an individual activity in school. The development of each child depends on the progress of the group. Consequently the teacher concentrates on the pupils' common interests and needs instead of emphasizing their individual differences. It would be wise, I think, to go slow with the methods of modern psychology which stress individual differences. Eventually, of course, individuality is bound to assert itself in the pupils' varying achievements. But this should not encourage the teacher to exploit individual differences. Instead of neglecting the backward pupils to promote the progressive ones, he should see that each child promotes and stimulates the work of the class as a whole, and that all acquire the essential basic skills. Teaching and learning are most effective when the teacher is convinced that all the children under his care are educable.

This, however, should not make the teacher oblivious to differences in achievement or needs. He must integrate the human material by emphasizing identities rather than distinctions, by reducing disparities in order to raise the general level of the class.

Changing hereditary Traits

But this does not mean that individual needs should be ignored. For instance, if a child is weak in a certain subject the teacher would do well to investigate the cause rather than put it down to the pupil's lack of intelligence. While it is true that certain mental

abilities, or lack of them, are inherited, we must recognize the fact that hereditary traits can be altered. In fact this is what happens to a child throughout the formative period. He is both pliable and educable; so by encouraging the backward pupil we can maintain a fairly even standard of attainment in the class. Because psychologists have stressed individual differences so heavily, we tend to overlook the fact that, with few exceptions, children develop according to a certain pattern which is fundamental to all human growth.

Teachers are aware that a child's mastery of an activity or skill is not automatic or instinctive. It is the result of sustained practice. Thus the level of his achievement at any stage depends on the extent to which his natural potentialities have developed or changed. Opportunity and guidance are all-important.

If a teacher is enslaved by the many psychological theories he learnt at the training college, he will not succeed with his pupils. Mental tests have their value, but they also have many shortcomings. Classifying pupils into groups according to mental ability not only perpetuates differences, but creates new ones, defeating the very purpose of education.

If this argument is accepted, then obviously education must be reorganized from the elementary school upwards. Our task at the elementary stage is to lay a sound foundation for learning and to help all pupils to proceed at the same pace as far as possible.

Such reorganization poses many problems, to be sure, but let us make a beginning by having a single curriculum for all secondary schools. At present one set of subjects is taught at a certain level in one school, while a neighbouring school teaches another set at the same level. When pupils change schools the teacher is faced with a major problem. By the same reasoning, it is also important to adopt a single method for teaching core subjects.

If pupils are to progress at an even pace, no class should have more than twenty-five, for it is impossible to attain a single standard of achievement in a large class.

A wide variety of extra-curricular activities must be provided to broaden the pupils' experience and teach co-operation.

Teachers often absolve themselves from their duties by claiming that pupils should be left to develop according to their 'natural abilities'. But there is no such thing as undirected and un-supervised education. The function of the school and of every educationist is to guide, develop and instruct.

4

Education For Developing Aesthetic Sense

To be a proficient artist or musician is one thing and to be an appreciator or critic of art or music is another. The quality of creating requires some measure of talent whereas the art of appreciation may be developed by acquirement. Talent may take care of itself and does not stand so much in need of help from outside to exhibit itself. But for acquirement, education—right kind of education—is needed. To enable the child to acquire the ability to appreciate art or music and, if possible, to develop the quality of creativity, the parent or the teacher has to discharge certain responsibilities, a neglect of which, knowingly or unknowingly, may debar the child from possessing a virtue which right direction may invest him with. The author has explained and illustrated the process which has to be gone through in order to develop aesthetic sense in children right from the beginning. Over-anxiety in parents or teachers to achieve marvellous results in the shortest time possible spells disaster of children. There are in the present article warnings as to what is to be done and what is to be avoided in the education of art or aesthetics, comprehensively speaking.

Introduction

Education rarely produces artists or musicians who create masterpieces; perhaps it cannot do so owing to the somewhat inadequate human material and the mass system of education. But

it can surely produce people who love and appreciate the good in books, the beauty in fine arts, the joy in music and the like. It can do so because the child growing up in its lap is by nature receptive to things beautiful, artistic and fine in his environments. Education has only to draw upon the child's weakness, though his weakness itself is his great strength looked at from a different angle. Education has only to cultivate what is perhaps innate in the child, to keep up what is natural to him, to stimulate what is vital for him and to prevent from decaying what can make his life worth living.

First Principles

Children growing up in homes saturated with beautiful sights of art paintings and rhythmic sounds of soothing, gentle music have been found to possess an aesthetic sense which is conspicuously absent in those brought up in dull, drab and dreary homes devoid of things beautiful. Unlike other senses, aesthetic sense gains the chief prominence in their behaviour, their expression, nay in the essence of their personality. It becomes the hallmark of their self, a source of their delight, and a sign of their nobility. This life-giving sense clamours for expression and satisfaction in the little child who consequently looks up for beauty and creativity in things around. Deny him the things and thereby starve or frustrate him, or cause him to satisfy the craving in ways other than artistic. In either case you kill the good in him by mutilating his aesthetic sense. Provide him with all sorts of arts – art pieces, classics, dance items, etc. – giving him the option of choosing for himself one which satisfies this sense and you have ensured in him a lifelong love for the beautiful.

Primitive in his nature, the child is no less primitive in his flavour in art. He uses strong and loud colours to paint a picture which apparently has no meaning or technique behind it; he experiments with clay, plaster, crayons, paper, to produce nothing at all or at best poor pieces of art. This should not enrage his adult master nor disappoint them. Such products of his are unskilled expression of his ideas which are always ahead of technique. Nevertheless his drawings reflect things which can give adults an insight into his personality. As in other attributes so in art the child is a poor specimen as against an adult. Rush him through technique before he is ready to learn it and you stifle his expression.

Forbid him to learn the technique when he is ready and you impede or hinder the natural outflow of the expression in its proper form and at the right time. Let him, therefore, paint or build his own world of thoughts and ideas in seemingly artless ways till he is ten or eleven, when he is probably ready to pick up the technique with a view to gratify his consciously-felt need of expressing himself. All teachers including those teaching arts, should be able to feel and think the way the child does. Then alone can they teach the child a creative art.

Adult Interference with Child's Self-expression

We adults hasten to direct, advise or command children whenever they are landed in a difficulty. We are wont to direct them on to our own models and patterns. The child dislikes such overtures and is discouraged if we impose the same on him. Art must harmonize with his own tastes and interests and not with those of adults, otherwise it loses its charm for him. This has often been seen in homes where over-impatient parents expect their children to be arch artists overnight. Suggestions or guidance in the use of equipment—colours, brushes, needles, etc.—must indeed come from the adults. The ways colours are mixed, oil cloth used, smearing avoided, brush stroked or drawing-stands fixed—all need to be taught or explained. But everything else should be left to the child, of course with occasional hints, if and when necessary.

The Stage for Teaching the Technique

After the child has passed through the rudimentary stages in his art activities, in which he does no more than know his materials and express his ideas, he should be led into the techniques and skills, but just according to his need and development, neither more nor less. Then alone he will go ahead with creative art, take pleasure in it and devote himself whole-heartedly to it. He may still not be meticulous about following a set technique, but this should be ignored. Teach the technique when the child craves for it and can use it. A spontaneously-created product gives him the ability to appreciate others' works in art galleries. It instils in him confidence, fearlessness, ecstasy, power of expression, and adds knowledge of ancient and great art work.

All of us tend to tap our feet on the floor or swing our body or beat our fingers on the knees — all these rhythmically — when

we hear music. That is how we instinctively respond to music. So does the child do when he makes rhythmic movements of the body while music is on. No endeavour need be made by over-ambitious adults, in a bid to make the child a great musician in a day, to interfere with his natural response to music. Simple and well-graded music would satisfy his needs for a number of years. Let him respond freely and without becoming self-conscious. As in art, so in music, teaching of technique should be postponed till a later date, when the child needs it for his expression. Formal singing lessons on any instrument should also be avoided till the child moves on to the next stage. Gradually, however, he is influenced by the pitch, meter, spacing and speed of the music until he starts understanding what constitutes good or beautiful music. Plato and Aristotle were exponents of 'education and expression through the body'—body which responds to music in a natural, rhythmic and free manner and thus provides rapture, love of music and appreciation of beauty. Music excites inner self, stirs up emotions and excites the body to activity. It wards off inhibitions, encourages spontaneity and releases tension.

'Music for all'—Meaning of

To appreciate and be attracted by music is common to all humans but to be a musician or a singer is the special quality of a few. Yet it would be cruel to deny the child opportunities to sing, no matter how low he is in his musical ability. His singing is the best expression of his emotions and a worthwhile mode of showing his happiness. Let him learn to sing from his parents or his friends, singing around an instrument, if he expresses love for it. Let good singers and renowned musicians sing to children. Let the child sing in the bath-room or drawing-room as it gives relief from the stresses of the prosaic life experiences. Music for all, in this sense, is a possibility, though it may not be possible for all to become musicians. It is believed that one who listens to best music in one's early days can best appreciate music, and hence the need of surrounding the child with beautiful recitals. Some direction from parents and teachers with regard to the choice of music items from among those presented to the child through radio or other contrivances is necessary to check his growing fondness for club-type tunes.

Developing Love for Books

Love for books is an equally important medium of developing aesthetic sense. Small children are keen to hold books in their hands and do fake reading in homes where parents and others read. This happens almost naturally, without our ever having taught the child to do so.

To develop this urge let the child own books so that he uses and cares for them. Teachers and parents can help the child to love and appreciate books. Let him handle books as a part of his daily experience; he would do it on his own account as his parents share his interest in books and as they recite daily from books. He finds companions in books and concomitantly acquires self-assurance, self-discipline and seriousness of purpose. A little library of his own is a treasure more attractive for him than toys and other luxuries. A good book stimulates him to think and to find beauty in his life. He enriches vocabulary and can communicate widely. He comes in touch with the great, whom he cannot meet in real life. He can appreciate all the good all over the world. He understands life in a real sense as literature is meant to give us life more increasingly. Teachers doing poor teaching and parents averse to book-reading cannot create in children love for good books.

Conclusion

The child who hears only good Hindi or good English is lucky as he learns to speak only words he hears. Poor speech, blasphemous language, atrocious vocabulary or dirty talk, are in the last resort, attributable to parents using similar language. As such, parents need to improve their speech if they want their children to cultivate and appreciate beauty in whatever is said or uttered. Let us help children to learn to express finely, courteously and correctly. Let them relate their own experiences freely and naturally. Let them see and recognise beauty in ordinary objects and situations around. Let us show courtesy and interest in all that they utter.

Life presents beauty in innumerable forms. Only we need to be adept in the art of recognising or appreciating it. Ignore it and life becomes colourless, void and charmless. Take notice of it and life gets enriched and exalted.

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5

Education For Peace

Peace, in the struggle for existence, so eluded mankind that education had to step in. Defenses of peace have to be constructed in the minds of men. Since minds are trained by education, education alone can pave the way to peace. Education for peace warrants the march of education towards a state of inter-human relations that are free from conflicts, aggression and violence. Peace researchers in education can look back to such illustrious ancestry as Bentham's Plan for Universal and "Perpetual Peace", Kant's "On Everlasting Peace" and Comenius's "Peace Pedagogics" which teach that education is to lead man to putting his personal and social life in proper order, and to guide him towards the realization of the order of creation as an order of peace.

Wars in the past have always wrought havoc. Dreaded by the over-kill capacity of a modern belligerent force, overwhelmed by the powers of nuclear annihilation that can instantly destroy mankind and its resources of civilization, and considering the immeasurable sufferings as also the immense costs of wars, the world today strongly feels the necessity of avoiding military conflagrations. All nations consider arbitration and peaceful solutions of international conflicts worthwhile and condemn wars. Nevertheless, fighting out social and political conflicts and border problems seems by no means to be regarded as taboo. Hence the dire need of an education for peace with the aim of producing man, since men resort to wars, who by his very temperament regards war as something detestable or undesirable for the solution of conflicts. And if such education could be more effective, it may produce man whose nature and personality are such that nothing, howsoever serious and provocative, stimulates him to war or arouses in him a thought of launching a war or even a violent aggression. Then alone can wars be averted.

If education is to so metamorphose man, its task is by no means easy. But, can education do it? Can education change human nature in which aggressive urge is said to be an essential ingredient, and if it can, what kind of education would it be, and in what way will it do?

Human instinct of combat is universal and inborn, it is said. If aggression in animals and humans is innate and is as primary an urge as the urge for food or sex, as is believed by comparative ethologists, aggressive human behaviour or for that matter fighting or wars cannot be prevented. At best, expressions of the potential aggressive urges can be channelled off only into such harmless forms of behaviour as sports competitions. Such channelling, to be achieved by cultural or social control that education alone can foster, is impeded because the instinctive inhibitions of the aggressive urge against members of one's own species are far less effective in man than in animals. Perhaps education has to make these inhibitions more powerful, or to make the said channelling of aggressive urges into socially acceptable behaviour more natural. A very tedious and long task for education indeed.

When a goal is blocked, one meets frustration which in turn arouses anger and violence. If aggression is always the result of frustration, as is put forward by behaviourists, it again is inevitable because frustration is too stark a fact of life to be avoided. The child who is forbidden by its parents to play with a favourite toy shows hostility towards them, or it may become aggressive against a brother or sister, or it may strike crockery against a wall to work off its rage. Such connection between frustration and aggression may also be exhibited by a lover who, frustrated by beloved's negative response, may resort to aggression by destroying, torturing, retaliating, slandering, abusing or even self aggression like suicidal attempt. In other words, it is thought that aggressive behaviour does not spring from an urge naturally inherent in man but that it is a reaction to a frustrating experience or that, it is "learned". It is this reaction which education is to take care of.

Our urges are not always satisfied, but they cannot be wished away. Since it is not possible to avoid all frustration or urges or desires, education has to build up inhibitions against socially unacceptable expression of aggression, and to develop in people frustration-tolerance. At the same time education need not train people to stage a retreat from every frustrating experience or to

hide themselves in a cloister when posed with a difficulty. Education, instead, should train people to face the tempests and storms of life, to look for rational means of removing the obstacles when prevented from carrying out their realistic and achievable desires. Frustration should stimulate the individual to learn and solve his problems instead of arousing his hostility against those who caused him frustration. Educator must look for causes of a pupil's aggression and avoid them as far as possible. He must produce individuals who would have no frustrations, because considering that frustrations are often caused when goals are blocked, he would train pupils to cherish only such desires and goals as are achievable, as are commensurate with their own potentialities, and which the society approves or atleast does not bar, so that the goals are more often than not achieved. There are, however, cases when environment alone bars the way to the realization of the most possible and realistic goals. Education must, therefore, prepare people for this formidable reality. It should develop wholesome personalities which have healthy outlook on life, which are free from schisms and inconsistencies, from discords and conflicts, from nervous and mental tensions, and which can make rational approach towards solution of problems. Education, in this regard, needs to free the child from the pressure brought to bear on the pupil from toilet training right up to the demands made on him by the home and school in a traditional set-up. Education must have a slant towards mental hygiene.

The new eager hurrying world contains elements which disturb one's peace of mind and cause hostility which education must prevent. Whether an inherent aggression is to be channelled into socially harmless forms or whether frustrations are to be avoided, it is education that can make it. Whether aggression is innate or built up by reaction, it has to be prevented, or its causes looked into, in order to preserve or maintain peace and this can be done by the deity called education. In fact the scope of education has greatly widened owing to this requirement.

There are two kinds of aggression which are most common. There are aggressions between single individuals, and that between an individual and his environment. Another type of aggression is the one triggered off by international and social conflicts. These conflicts are the results of clashing economic and power interests of the states involved. These cannot be attributed to individual

feelings of aggression and their accumulation or to clashes of individual interests. Therefore, the education for peace relevant to inter-personal or inter-human aggression may be inappropriate to international conflicts or to inner-social conflicts where tensions between individuals originate merely because those individuals face each other inside institutions as functionaries on jobs assigned to them by society. When the teacher frustrates his pupils because of the function allotted to him within the school, he provokes their aggressive feelings which are widely different from the aggression between individuals. So is the case when a ruler in a bid to mete out justice happens to annoy some individuals.

Mental conflict in an individual, conflicts between individuals or states or groups in a state are inevitable in this highly industrialized and populous world of extremely ambitious men and women. As the nature of conflicts differs, the possibilities of educational influences to prevent their origin differ. So do the possibilities of education to resolve the conflicts.

A very great responsibility for the creation and preservation of peaceful existence lies on the educator, though the responsibility for the realization of peace falls on the educated and cultivated man himself. Since peace is the most imperious need of human existence today, education for peace must get top priority in our system.

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6

Education For Co-existence

Countries differ from one another in their systems of education, owing perhaps to differences in their history, culture and needs. They, however, tend to be similar to one another in their systems whenever there is a jolt from near or afar. Political or other events within a country and without also go a long way towards influencing the country's educational policies. The great Russian Revolution transformed Russia's system of education. The first sputnik that Russia hurled in the skies stimulated radical changes in the American education. Independence in the year 1947 led to several big changes in India's educational policies and practices. Even Chinese attack in the year 1962 set us thinking with regard to the content of our education. All these attempts reflect man's deliberate will for co-existence which he intends realizing by changing the system of education so as to cater to the newly arisen needs or to bring this system nearer to or identical with the systems obtaining in countries which excel in some ways. Commonalities, besides differences if any, among the systems of education of various countries are therefore a must for achieving co-existence of peoples.

To educate the people for making them literate and enlightened or ideal men and women, to enable them to survive in the struggle for progress, and to help them pace up with and even excel other nations in growth and development are the targets which inevitably bring about similarities in the educational systems of different countries. Similarity in their general approach to education is primarily due to the basic aim of transmitting cultural heritage to their people.

International understanding, world peace and co-existence are perhaps the most urgent requirements of the faction-ridden world and the bleeding humanity. These, above anything else, are the commonest of the needs of different countries. If education aims at the development of man — man who alone can lead to fulfilment

of the three needs-why should we not think of evolving a system of education which produces the man who would deliver the goods? Since this kind of man each country would require in each of its individuals, it would be necessary to evolve a common or universal system of education. Arguments against this system on the plea that it would not cater to a nation's genius, culture or need, or that it would produce mediocres only seem to be based on faulty understanding of this system which in no case denies a people education characteristic of its own genius as well.

Before any international system of education can be founded, it is necessary to solve some of the insistent problems of education common to many countries, as otherwise these problems can become stumbling blocks in the way of the international system. Such problems can bring any system of education, including the envisaged international system, to a grinding halt. Language problem, problem of educational finance and educational administration, and that of religious education may be some such problems. It may be difficult to enforce the world system of education in a land where such problems tend to raise their head every now and then. Some of the growing countries have solved these problems for good. They are naturally in a better and more strategic position to adopt the international system of education. "How they have solved those ticklish problems" should be an eye-opener to those for whom these problems have for long become a constant head-ache. When we fail to solve an educational problem scientifically or with sufficient reason, we tend to import politics into it so as to make the problem or ourselves more popular and attractive amongst the people at large. This happens because an appeal to one's emotions which a politician makes is always greater and more capturing than an appeal to one's reason which an educationist or a philosopher makes. Ultimate goals should not be sacrificed at the altar of expedient measures to which many an educator sometimes proudly resorts to in a bid to achieve immediate goals. Luckily in our country a more realistic approach towards education and a better appreciation of educational ills coupled with will to overcome these ills are now simmering. This augurs well for the country and for a system of education that promises co-existence.

Teacher is the only educator who would wield the world system of education as also any other system. He alone would produce the man who can guard peaceful co-existence in the

world. It is he who meets the child when the latter enters the arena of education. It is he who puts it in the gruelling mill of growth and development. Again it is he who drives it on and on till it, like a finished product, leaves the portals of his *alma mater* to pursue life as it comes. But for him no education would take place, no schools would run, no machines would work, no winds of change would blow, in fact no nation would grow. We must, therefore, make him strong, accomplished, efficient and willing enough to be able to carry out the system of education that the society needs. This can be done by reorientating the teacher education programmes which of late seem to be losing all significance. Besides reorganizing and renovating the content of teacher education programme, there is a need to institute in the teacher training institutions programmes which would lead to produce favourable attitudes towards teaching as such and which could turn the trainees into devoted and efficient teachers. Training them for wielding international system of education, or at least for teaching with a bias for international understanding and peace if that system is not yet arrived at, is another imperative factor to be kept in view.

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Education For Self-Realization

Theologians, saints, metaphysicians and sages down the ages plunged into the cosmos and trudged along the road to real freedom directed by none other than the soul, their cosmic conscience which transcends all that is worldly. Out of this blissful state came their goodness, their love of men in relation to the abstract though creative universe, their infinite liberalism, their great philosophies. Several men both in the East and the West attained such heights and shone like beacon-lights on the horizon of this world of men and materials. They gave out truths and golden rules, born out of their sense of oneness with the Creator – truths to guide their fellow-men towards love, peace, order, happiness. Some of such geniuses owe their birth to India's soil.

Ancient Indian philosophers, as is evident from their early writings and the *Upanishads*, realized the holy truth, "Find 'Atman' to find 'Brahma', the celestial principle, the final happiness", or Buddha's 'nirvana'. *Vedas* and *Vedanta*, as well as Shankara who was the most distinguished Vedic interpreter, preached the same thing when they announced that true wisdom is the outcome when 'Atman' and 'Brahma' are in the divine state of absolute sameness. Later, Gautama Buddha and others made keen penetration into the Eternal.

The meaning and significance of life became a problem to ponder for Buddha in his early years. The misery and sufferings of men agonized him to the extent that he with will and determination set his foot on the tough path of renunciation and detached study of the ways which could rescue and recover human beings from sin and its penalty. Repudiating his wealth, property and home, Buddha wandered extensively as a monk and cogitated in abject loneliness until he achieved enlightenment; after which he completely devoted himself to preaching his ideas and to winning

others to the fold of Buddhism. His splendid teachings to get rid of suffering consisted of dispensing with temptations and passions and arriving at truth. His was the method of knowing the cause of suffering and ending it by a strict moral discipline.

Several philosophic treatises which were summed up in the *Upanshads* and which were contemporary with Greek philosophy give us the discoveries of great Indian metaphysicians who probed into the depths of the self, the Creator, death, the immortality of soul and ethics, and propounded everlasting theories of the philosophy of knowing and being. Kapila's Sankhya and Ulukhya's Vaiseshika as well as the Veda hymns are pointed towards spiritual renunciation and self-denial as the essential means of securing oneness and unity with the Perpetual which knows no end. Again, Shankara's theme, "Soul and God are one and the same", Madhva's, "Soul and God are different", and Ramanuja's, "They are different but identical", emphasise the irrevocable relationship between man and Eternity.

Yajnavalkya was a strong believer in 'Brahma' ("the basis of all existence") and 'Karma' (the effect of one's action), upon which depended deliverance through the soul's realisation of its identity with 'Brahma'. Isvarakrishna, though a dualistic philosopher who believed in the fundamental difference between matter and soul, stressed that suffering can be rid of by the perceptual seizure of the absolute distinction between matter and soul. Shankara, a saint and scholar as much as a reformer, heralded meditation and reflection as the means of liberation from servility and the state of being knowledgeable. He preached that only selflessness in thought, action and feeling could lead to truth. Vallabhacharya, a devotee of Vishnu, who, being super-human, had the power to originate and preserve the world, pleaded for the individual's complete self-realization, which according to him is a part of reality.

Patanjali, the famous founder of India's Yoga philosophy, which, as a system of mental culture, is regarded as scientific and sound, in his *Yoga-sutras*, illustrated and preached how spiritual emancipation could be reached without at the same time ignoring physical culture. Ramakrishna, the great modern philosopher who has inspired Vedantic studies in the West, proclaimed that *samadhi*, which is the final stage of communion with God, could be attained through Hinduism as well and as much as through Judaism or Christianity. Later, Vivekananda, influenced by Ramakrishna's belief

in the unity of all religions, established Ramakrishnan missions for service to humanity. "All is Brahma, and hence the active service of mankind as God, rather than inert contemplation" was his motto. His moral influence is discernible in the writings of such thinkers as Dr. Radhakrishnan and Aurobindo and in Gandhiji's life devoted to suffering humanity.

Rabindranath Tagore, the great poet, dramatist, novelist, philosopher and believer in ancient Indian ideals, who never accepted the morality of adapting the means according to the ends, was convinced that the divine in man could be and should be realized and that such realization could lead to the individual's perfection. Lastly, Mahatma Gandhi who used spiritual power in achieving India's independence, in converting the oppressors to his fold, and in divesting the autocrats of their opprobrious tyranny, raised the effective bulwark of non-violence which included self-suffering with inner strength to oppose the evil and to reach the right goal.

These excursions into the land of the unknown and the abstruse not only helped the great philosophers to understand the riddle of the universe, but it revealed to them a reality of which man is a part and the way man could function as an essential and productive element of that universe. Their dips in the cosmic ocean brought out certain ethical and moral dicta which are eye-openers to most of us who are merely slashing out our existence in mutual jealousies and savageries.

Thus, education should so develop the mind and emancipate it as to help it reach the stage of self-realization.

II TEACHING MEDIA

8 Teaching Through Audio-Visual Aids

Intuition or other mysterious modes apart, sensory organs are the chief vehicles of learning. Bereft of these, human adult would not be much different from what he was in infancy, except of course, in physical growth, or he would be living in a world of make-believe, fantasy and confusion. In fact, it is somewhat difficult to guess the state of such a being, though it goes without saying that the scope of his acquired learning would be seriously limited. A child born crying – psychologists attribute this crying to his traumatic experience of being born into this world – adjusts to this frustration with the help of knowledge picked up through sensory organs, in a long course of time; he gains mastery of the things around, assimilates more and more learning materials and finally becomes an apostle of knowledge and thereby power – all through the medium of his sensory organs.

It is matter of common experience that man is receptive to external impressions and stimuli through one or another of his sensory organs. Though learning through other sensory organs is not ruled out, his auditory and visual apparatuses, are perhaps, the most convenient and powerful modes of learning. His eyes and ears are ever agog to receive and ever ready to respond to environmental stimuli which warrant his attention.

Audio-Visual Learning

Is learning more effective as a result of visual presentation of subject-matter or is it so as a result of auditory presentation?

A group of adolescents, both boys and girls, was asked to learn a poem presented to them visually for half an hour. A comparable group was advised to learn it from auditory presentation, made for the same time. The reproduction was superior in the case of the former group. Facts of history were tried on the two groups. The results were reverse. So the answer to the question posed above, is that sometimes, auditory and sometimes visual presentation has been found to be superior; individual differences with regard to one's more or less receptivity from one or the other presentation, the nature of the subject-matter and a host of other factors influencing eventual performance are not excluded. Elliot and Henmon, Koch and Krawiac, arrived at similar conclusions.

A combination of both auditory and visual presentations was then tried on four comparable groups: it was found better than either alone, in each group. This finding is similar to the one by Henmon, Koch and Elliot. It is no denying the fact, however, that time and space limitations, which stand in the way of an individual to learn from visual presentation, are too great, in the sense that the incoming information may be disseminated at a time he is not prepared to look on or at a place different from his. Auditory presentation has the advantage of being heard irrespective of time and space. Learning through television may reduce the difference in effect of the two presentations.

Teaching Aids

Sometimes ideas are such that concrete experiences cannot be tied up with them. Columbia is too far away, Jalianwala shooting is long past, the marketing of fish is intangible. A well planned motion picture, photographs and other visual aids can do the trick when the actual concrete experience is not feasible. Tape records and sound films can bring the sound of nightingale or the roar of Bhakra canals.

Words are seldom used in isolation; these are usually used in a sentence or used in a phrase or a context; hence the need for utilising the clue of context when telling the child a meaning of a new word. The context enables the child to interpret it adequately. He can respond to the paragraph as a whole, though he may stumble around trying to understand an individual word. He finds the word 'abject' more meaningful if we present it in the sentence 'Famine left people in abject poverty' than when he has to surmise the meaning of this word in isolation.

Attitudes towards an occupation, a community, democratic institutions or war can be built up through dramatic appeals *via* stage acting or movies. Emotional speeches, rituals, celebrations of important national days or events, keeping of traditions and the like, make pupils acquire attitudes.

In teaching an abstract concept like justice, honesty or roundness it is not possible to find a single object in the child's experience. All the same, the child must learn these concepts from experience with concrete objects. To help him to understand roundness, we must show him round papers, round heads and circles drawn on paper. We should also show him red, green and white circle. In short we must show him a large variety of concrete objects all having the common features of roundness. The child must also see a number of situations, real or imaginary, each of which exemplifies honesty. He must also face situations in which honesty does not appear, but sympathy, kindness, co-operation with which honesty may be confused, appear. In teaching abstract areas we should choose materials in which the abstract idea is considerably prominent. The roundness of an eight anna piece is, for instance, more concrete than the roundness of a room. The former would therefore be preferable for beginning the teaching of roundness. The concept of justice may stand out more vividly in 'The Merchant of Venice' than in 'The Brothers Karamazov'. Begin with the former in the first instance. The child's mastery of abstract concepts, depends ultimately, upon his own activity. After guiding him, ask him to pick out round objects from his environments, to point out cases of justice or honesty from newspaper reports, or to recognise rhythm in poetry or songs. His trial and error, his insight and his extra study would then instil in him the functional counterparts of abstract concepts.

Thus, through sensory modes, man goes on building up the edifice of learning, culture and institutions which go a long way towards immortalising him.

9

Instruction through the Senses

THE SENSORY ORGANS are the chief modes of learning. Deprived of these, the human adult would not be much better than what he was in infancy, except of course in bodily growth. He would be more like a vegetable than an animal. In fact it is difficult to imagine the state of such a being. A child gradually acquires knowledge of the world around him through sight, touch, taste and hearing. Man receives impressions through the senses, of which seeing and hearing are the most important.

Is visual presentation a more effective method of teaching than aural presentation? The experiments cited in the preceding chapter and re-mentioned below answer this question.

A group of adolescent boys and girls was asked to study a poem which was presented. A similar group was advised to study the poem after hearing it read out. The first group mastered the poem better than the second group. Facts of history were tried on the two groups, when the results were reverse. So the answer to our question is that no hard-and-fast rule can be laid down. Individual receptiveness, the nature of the subject-matter and a host of other factors which influence performance must be taken into account when we consider methods of presentation. Eminent educationists such as Elliot, Koch and Krawiec have arrived at similar conclusions.

A combination of auditory and visual presentations was tried on four comparable groups, and this method yielded better results in each group than auditory or visual methods used singly. There is no doubt that limitations of time and space hamper visual presentation. Auditory presentation does not suffer from this handicap. For this reason television may prove to be the ideal medium of education, for it combines the two methods.

Visiles and Audiles

Some people believe they are visiles. They feel they can remember things better if they see them. Others believe they are audiles, that they learn better through hearing. The majority of us tend to be audiles. A preference for visual as against auditory methods, or *vice versa*, is not a measure of efficiency, as experiments do not show one method to be superior to the other. The teacher should feel free to use whichever method is found more suitable to a given situation.

Principles are often explained, concepts interpreted and projects described by teachers without bringing their pupils into contact with actual experiences. An experience may be visual, auditory, both, or even multi-sensory. Experience is much more effective than a combination of many teaching aids. It influences not only the child's learning but his personality and all-round development. Teaching becomes vivid and fruitful if it associates new matter with something that the child understands, in other words, with real objects and experiences. A rainbow, an orange or a peacock are things too complex to be described in words alone. We may think a child can see rainbows, oranges and peacocks by himself. This is only partly true. The teacher must help his imagination to develop, and this can best be done through projects. A pupil who assembles a radio-set understands the concepts of electricity and so finds physics an easier subject. The child who grows vegetables in his compound becomes aware of soil, insects and rainfall. His awareness of the fact that water is to be found below dry top-soil adds a new interest to his study of geography and the water-table. By sharing in school management, pupils will become familiar with problems in organization, budgeting and administration. A modern printing press was visited by a group of high school students. A comparable group was verbally instructed in the working of a press. When questioned on the various functions, the former group showed greater knowledge than the latter.

Visual Aids for Remote Experiences

Some experiences are too remote to be brought to the classroom. It would be difficult for pupils to go to sea with a fishing fleet, or to visit a coal mine. A well-planned motion picture, photographs and other visual aids can overcome this difficulty to a considerable degree. Tape records and sound films can bring to the classroom

the sounds of the jungle or the roar of the lions. Constructive attitudes towards occupations, communities and democratic institutions can be built up through the audio-visual approach.

In teaching abstract concepts such as justice, honesty and tolerance, concrete examples must be given. To understand the concept of honesty, the child must also face situations in which honesty is lacking. The child's understanding of ideals depends ultimately on his own activities. After guiding him, ask him to identify cases of justice or injustice, honesty or fraud in newspaper reports or from his own reading. Trial and error is an invaluable method of developing the senses.

10

Aesthetics In Educating Exceptional Children

Thanks to the ingenuity and considerateness of modern society and its enlightened educators, exceptional children, who include the disadvantaged, the emotionally disturbed and the handicapped, are now recognized as human beings who deserve respect, sympathy and acceptance. Still more satisfying is the fact that education has since reached such children.

Whereas traditional framework of education has since found its way towards the schooling of exceptional children, aesthetics in education has now been tried as yet another way of reaching these children. Media which are symbolic of their world and which stress non-verbal modes of communication have been used in their education.

Dance is one of the media which are used to help persons express themselves. Psychologists have used this medium for the same purpose in therapy. This is a medium which can be most advantageously explored and enlarged. In dancing one spontaneously expresses his conflicts, projects them and transfers them from his own person to that which he is creating out of his imagination. In it one's aggressive and regressive urges are expressed in a socially acceptable way. The handicapped child who is unable to articulate his needs finds in dance a means of easy communication. If he is afraid of others, dance serves as an avenue through which he interacts at a level that suits him at a particular time and responds to the group process. The feeling of creativity that he experiences in dance builds up his self-esteem. This aesthetic medium also permits the expression of tension, anxiety, primitive drives and make-believe. This is a medium which is perhaps the most palatable channel of expression for the handicapped children who develop feelings of rejection, isolation, resentment and withdrawal in the

environmental conditions prevalent in the home, community and school (5).

Parents who make no demands, set no standards and provide no motivation in the process of socialization, as also those who are demanding but unloving, cause an active hostility, in the child, to social standards as they are met. Again, in early school years this child as a consequence of an inherent handicap or trait is forced to identify with an out-group, which discourages healthy positive growth. This may lead to a feeling of isolation and insignificance which hampers satisfactory development in the area of social relationships (6). Close friendships which are essential in developing and interpreting the more intimate aspects of social experience are also hindered in the said conditions. Aesthetic environment of home and school influences the child considerably. It is this environment which contributes to the child's self-concept by developing healthy attitudes, especially such attitudes as the child's attitude toward his peers, toward his teacher and school, as also his peer's and teacher's attitudes toward him (7).

Like dance, art and music have some positive attributes for expression through non-verbal media. The culturally handicapped child may experience directly his feelings, attitudes and interests, concerning his world, through artistic and musical expression. He may be able to manipulate a situation that enables him to put some order into his life after having struggled in a life of confusion, noise and toil. The child who is permitted these avenues to express himself receives the feedback immediately. He has not to wait for the result or grade at the end of the term or for a smile on the teacher's face. He is, by gradual steps, creating his own reinforcement. His rewards become intrinsic rather than extrinsic. Besides, during the process, he feels that he has some worth, that he can create a finished product like a piece of art or a well done dance assignment. Thus the educator's provision for an aesthetic atmosphere, which an integration of non-verbal media into the educational curriculum generates, may serve as the basis for the child's self-expression (5).

An affective response, which follows a variety of aesthetic cues, stimulates learning. The retarded reader can be given an opportunity to develop such responses through co-operative and creative behaviours that permit genuine experiences. This would equip the child with the affective background that makes reading enjoyable.

Aesthetic cues are similar to language symbols and can illuminate meaning by leading toward experiential learning. A true experience, as Dewey said, has an aesthetic quality which makes it complete and meaningful. The retarded reader can be helped to overcome a difficulty by proper use of affective values. The written word gives the author great powers of persuasion by arousing affective responses from the reader. The cues put up by the author and the perception of the reader interact in an aesthetic network by which communication becomes meaningful and complete. This process is impeded in the case of the retarded reader, because his responses are limited. For him a meaningful and purposeful programme would warrant elimination of all circumstances that restrict the free functioning of his capacity for affective responses (4).

Several researches have shown that mentally retarded children can achieve full development if they are educated in a warm, affective climate. In such climate the children experience positive interaction with adults and gradually become more independent and secure. Such climate also facilitates intellectual functioning and behaviour development (7). A comprehensive approach that emphasizes the affective or aesthetic dimension of man is necessary to bring about the desired climate. A re-awakening and re-education of those who come in daily contact with mentally retarded children, provision of special methods and procedures and a programme of meeting the children's basic needs, all of which aim at enhancing the rare gift of humanness are some of the steps towards this approach (3).

To teach reading, child-based reading method which encourages imagination and fosters creativity should be used. This method permits valuable emotional outlets by providing avenues of self-expression, opportunities for socialization, discovery of sources of incidental learning and stimulation of language development. Reading should not start with the arbitrary, lifeless and bombastic words of the traditional basal readers, but with words chosen by the individual child, words which have meaning for him. Emphasis should be on spontaneity, communication and self-expression. The learning of such skills as phonics should be facilitated rather than retarded by their integration into a context of the child's own stories. This does not mean that teaching reading will become the teaching of skills as such, though it may amount to a keying of skills to the child's needs. The process is meant to encourage the

utilization of opportunities for self-respect through fostering the child's use of initiative and dependence on his own imagination (1).

In this way, true, meaningful, aesthetic, relevant and self-fulfilling experiences produce desirable change which education is meant to foster. Such involvements result in individual transformation which good education is expected to bring about. In the programmes of special education, aesthetics can thus so enrich education that the child's understandings, attitudes, values and aspirations move toward the culture in which he lives (6).

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11

Machine Teaching

Science and Education

Progress in human knowledge and power produced by unprecedented advance in physical sciences has assumed astonishing speed. It is likely to gather still greater momentum as teaching becomes more democratic and particularly as educational progress produces more researchers in fields related to man's knowledge and his control over the environment including forces of nature. Progress in electronics, resulting in the coming of computers in teaching, is the basis of a revolution comparable to the invention of writing. Prospects for industrial production have radically enhanced and drastically changed.

There are innumerable scientific discoveries and their tumultuous impact, so that the basic conditions of almost every aspect of our physical and social universe stand modified or revolutionized. The scientific and technological revolution has affected the entire contemporary world by imposing on all men everywhere a concern with similar crucial problems and a rapidly increasing number of similar habits and practices.

Linked to this scientific revolution are the cultural and aesthetic movements that are forcing changes in values and ethics, in the transmission and perception of messages, in artistic production and cultural development. This cultural revolution has come into play simultaneous with the industrial revolution. Its driving force springs from a combination of reason and imagination, of the irrational and the emotional. Education bombarded by science and technology has to reckon with such cultural changes as well. In fact educators today are faced with a difficult, though fascinating, task of striking a harmonious balance between rational training and liberation of sensibility.

Developing Scientific Mind

Development implies adopting a scientific frame of mind which is both conducive to and resultant of integrating scientific values into our culture, using science and technology beneficially, and solving humanity's problems with what man prodigiously endowed with new elements and growing power for material progress has produced.

We can achieve our renewal, at the same time retaining our national features, by integrating science with our traditional culture and by integrating universal thought into our national life. Whereas a culture needs to preserve and sustain its distinctive character in order to survive, it can survive only by being able to change. The change that the assimilation of science and technology brings about will therefore do us ample good. Man's future is inevitably linked to scientific advances and the development of productive capacity which in turn emanate from education – education which is absorbing science and technology in its ever-open gullet and becoming more and more effective in the making of a complete man.

If man has to establish mastery over the decisive elements in his fate, we should have the capacity to prove that science and industry are not ends in themselves, their true object being mankind, and that these are the means to so educate the man as to make him as perfect, as complete, as possible. Science and technology must, therefore, become essential components in any educational system. They must be incorporated into all educational activity meant for children and grown-ups, in order to help the individual to control social, natural and productive energies. This will make him achieve mastery over himself, his choices and actions, and ultimately give a scientific turn to his mind enabling him to promote science without being enslaved by it. It is this kind of individuals who will perceive such prospects of scientific development as are exalting, impressive, not those that are terrifying or harmful. Such individuals, learning from the experience of industrialised societies, avoid the excesses and forearm their own country against the misuse of science. They, amidst unlimited possibilities for developing the planet and being one day free of it, may provide the vision of happiness that the beneficial and sane applications of science aim at. It is they, again, who can rule out the possibility of devastating aspects of science that can cause world-wide anxiety and horror.

Computer and Teaching

The development of data processing opens new paths for education. Computers, particularly, render multiple services, ranging from aid to school management and research to their strictly didactic uses. In the universities of U.S.A., U.S.S.R., Germany, U.K. and Czechoslovakia, computers are being commonly used both for teaching and research.

In many educational systems and establishments, computers are widely used for solving administrative problems such as control of funds, invoicing and accounting, payment of salaries and preparation of all types of statements. They are also used for organizing school transport services with maximum efficiency, solving organizational problems, planning and building. In case we have to analyse massive data, computers are used to identify, evaluate, collect and classify information in all its complexity and detail and supply it when needed. They also help students in developing self-educational practices by devising library classification systems, by data selection and by providing selective information on educational and vocational possibilities.

Computers have proved very useful in pedagogical research, especially in evaluating and checking school work. A large quantity of information about all children of the school is fed into the computers; this mass of data is organised and interpreted so as to provide a complete profile of each pupil during entire school career; this profile is eventually used for his final examination. Again, information accumulated in the course of studies is also used to perfect teaching methods and develop designs of individualized teaching.

The use of the computer in the actual process of teaching is, however, the most innovative. Dialogue between pupil and computer leads to efficient, rapid learning. Some other possibilities are repetitive exercises and intensive practical work as in U.S. primary schools, higher education in U.S. in complex disciplines like chemistry, demography, astronomy, Geography, Languages, Mathematics, Psychology, and teacher training as in Spain. Computer accelerates learning and at the same time stimulates and broadens understanding.

Lifelong education is another role of the computer. Teaching for this education allows elements of knowledge to be permanently available and upto date; also, the attendant logic brought into play

enables pedagogy to be selective in a way to which traditional teaching was only a crude approximation(3).

Didactic functions of the computer include helping students to learn to manipulate concepts and techniques and develop intellectual aptitudes, to explore at will possible solutions to a problem, to study the reactions of a representative model according to variables which the pupil introduces and to develop his decision-making faculties. The computer sets up conditions for a dialogue between pupil and system.

The greatest benefit of the computer is that it saves man from the routine of mental labour, permitting him to specialize in operations where it remains irreplaceable, such as posing problems and taking decisions.

Educational Technology

Scientific and technical advance has affected education in three ways. Firstly, there is a change in the learning process, which is tending to displace the teaching process. New theories of learning, which focus attention on pupil's behaviour while learning, have emerged. These theories highlight the principle of continuity and the importance of needs and motivations, of choice of content, of the hierarchic nature of learning, the inter-relationship between educational content and environments(2). Learning practices are affected by the disorderly and competing relations between the various media for transmitting knowledge. Multi-media systems are, therefore, needed to coordinate their utilization and effectiveness.

Secondly, benefit of educational technology can be obtained only by integrating technology into the system of education which implies overhauling the entire educational system. Superficial attempts, as we often make, to modernize education from the outside, such as clamping an apparatus on to a conventional system, adding to or multiplying traditional procedures, preparing programmes for using the computer and inserting them into traditional pedagogic activities, will not lead us anywhere. The purpose is to avoid economic and financial wastage by coordinating those educational techniques which are at present available to us.

Lastly, scientific and technological progress has an intrinsic value, apart from the quantity of material sources deployed, because the spirit inherent in that progress can influence educational systems even before the vast range of modern equipment becomes available.

Technological creativity gradually will ensure the indispensable standardization of intermediate technology and later its universalization (1). The intermediate technologies are the simplified technologies, adapted to a country's particular needs, that the country may use, at the same time as advanced technology is developing. These technologies would not require massive investment and yet these are able to regenerate education in developing countries like ours. In this way we can avoid delay in moving ahead while waiting for advanced educational technology.

Though progress in educational technology will permit a large measure of individual fulfilment, it may not solely accomplish the massive development of latent human resources which is the most vital component of our education. Mass participation in social and educational enterprise, liberating the energies of the people, and unleashing their creative potential would perhaps take care of this component.

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Education Through Technology

Education is undergoing a process of constant change warranted by the dynamic world and its fast developing institutions. We have travelled all the way from one-room school to the modern comprehensive school with its ever proliferating complex, rich and diverse curricula, teaching techniques, evaluating methodology and other tools. However, knowledge has accelerated to such a degree that the mere fact of change in educational system may not let us meet the world. The problem we are facing today is thus one of rate of change. We can no longer be rest contented with our own comfortable pace, conferring, meditating, experimenting and then waiting to "see what happens". We have to accelerate the change, speed up our intellectual reflexes, cut down our 'response time' to stimuli which spark off learning. This brings us to technological advances such as electronic media in education and the satellite educational programmes which go in the name of educational technology.

1. Electronic Media

Electronic media that industry in the past two decades produced have become major components in the changing educational process. A closed-circuit educational television (ETV) network aimed at a mass, or at least a group, audience, much like a college lecture was the first landmark in the field of educational technology. Many colleges, universities and public school systems in America today are wired for sound and pictures and are linked by their own ETV (8).

Other electronic media invented by industry aim at a person-to-person type of instruction. These are 8 mm cartridges, pocket radios, teaching telephones, and computers.

Print which ruled the roost in education has lost its monopoly

since the electronic media came on the scene. These media have altered our sensory profiles by heightening our awareness of aural, tactile, and kinetic values. The learner communicates directly with the medium. There are no middlemen between him and the cartridge, the television screen, the radio, the telephone, the computer. He chooses material that he is interested in or that he needs at the moment and paces it to his own speed, because he alone controls the 'switch'. These media, nevertheless, are the aids or supplements to education, a sort of enrichment opportunity. The live teacher is the dominant person in the classroom, and the media are his assistants, not his masters.

2. Computer-Assisted Instruction

Whereas television, radio, and films can only imitate or reflect or reproduce, computers can do more than that. They can manipulate, communicate and store large quantity of information, and they can pretty much do what the human beings want them to do. They are in a way extensions of the human mind.

A computer does what it is instructed to do. This "instructing", or description, is called a computer programme. This programme is a set of instructions directed to the machine to enable it to become responsive to the users. It is like a blueprint by which the computer reconstructs itself so as to react to the programme fed into it. The computer rebuilds its internal system into a step-by-step stimulus-response mechanism which the learner can manipulate to his advantage.

The computer is an all-purpose machine in the sense that the programme fed into it may determine what it may do. An address-printing machine can do just one task of printing addresses, but a computer may be turned into an address-printing machine by feeding one programme into it, into a guidance machine by depositing another programme into it, and similarly into any other machine (1). Thus a computer can become any kind of machine that we may like to make it. It can not only recreate, but can also exercise memory. It stores whatever information it is programmed to store, and this information may be retrieved at any time. No human memory, no library however large, can match the computer's capacity for storing information. We not only can tap the information we want from its memory, but we can also tap it in any combination.

Thus the computer provides a systematic and comprehensive

link between researchers whose findings it stores and users (who can retrieve) of research findings. Universities and secondary schools are linked to large regional information centres. Uptodate medical, scientific, agricultural, and business information is available at large central libraries, schools utilize a central processing system to schedule classes, score tests, keep records, print progress reports and provide guidance – all through the data processing machine called computer. The time sharing capacity of the computer enables a number of persons to communicate with a computer at the same time from different terminals; it enables a school to use trans-continental communication lines to place instructional terminals in schools thousands of miles away.

Programmed models are developed for planning purposes, for analysis of future land, building and staff requirements, and for cost-effectiveness studies. Simulation models are devised to analyse in a few minutes the effects of new methods of organization upon the school system for one year or ten years.

Besides its tremendous memory capacity and its capabilities in management analysis, the computer is an instructional tool that enables the child to communicate with and receive instruction from the machine. To begin with, the pupil uses the high-speed typewriter, called a terminal, for both instruction and response. Also, the machine can talk to him by means of tape-recorded messages that it has been programmed to select in accordance with his responses. Thus, if he types out "blue" in response to a question calling for the answer "red", the computer at once selects a tape that might say, "Listen, now, you know the blue birds all have been eliminated. Try again." For visual communication, there is a cathode-ray tube display, much the same as a home television screen. Also, the computer may show slides, which it selects from a random-access slide projector in accordance with the student's responses. The student responds by means of a light pen, with which he touches the surface of the cathode-ray tube. This system permits the most effective use of programmed instruction and has virtually unlimited branching capability (2).

Computer individualizes and personalizes education in this manner. A child takes his seat at a terminal in the computer room, types in his "number", and within the time it takes for him to type four digits, the computer finds this particular boy's programme, greets him with "Good morning, Johnny," and then proceeds with

a mathematics programme. It corrects his mistakes, gives him other examples and then proceeds to the next level.

Another variety of this individualized instruction is called Dial-a-Drill. At an appointed time, the telephone rings and a computer voice greets the student. The computer then gives him his drill in mathematics and the student's voice acts as the controlling mechanism for computer responses. The programme is highly individualized for just this student. It allows him two opportunities to be right before adjusting the programme downward.

Such computer instruction can be utilized in a traditional school setting, or in a variety of settings by placing the terminals in public libraries, apartment-houses, or even in one's living room. Since, however, the programmes are not isolated from classroom instruction, computer instruction should generally be confined to the school.

3. Computer Instruction *Versus* Human Instruction

The computer responds more readily to each student's immediate learning needs, and provides, at the student's option, the relational information necessary for engaging in a synthesizing process so essential to meaningful learning – the tasks that classroom instruction or even programmed instruction cannot do (4). The student is no longer a constant responder to stimuli manipulated by someone or something else; he also becomes the stimulus seeking responses from the machine (3).

When the computer instruction, as previously developed, offered the student ability to push multiple-choice button or write one-word answers in blanks, it was at best an aid in instruction and it depended heavily upon the human teacher. More recently, sophisticated computers have emerged which induce the student to answer open-ended questions and which then process and evaluate such answers. In this manner the computer acquires the human touch by engaging in conversation with its human counterparts (6).

Critics argue against the mechanical "teacher" and dub the machine as a monster mostly owing to its lack of human quality. The human teacher is multi-branched; he can go off in any direction as necessitated by a student's question, by his bewilderment or by his comment. This teacher establishes contexts of relevancy and relatedness for a plethora of concepts thus serving as a medium

for transfer of training (5). The human teacher is programmed to provide answers to unclear questions and help recast vague or muddled answers, because he is sensitive to the intent, concerns and anxieties of the questioner whose reach oversteps his grasp. This teacher can use humour to provide the common touch and thus establish a bond of mutual appreciation and respect between himself and the student. Such a teacher presents behaviour that is in response to the human being there to be educated, basing this behaviour on the levels of cognition, problem solving, creativity, feeling, and valuing he desires to promote in his students.

To an extent automation or machine teaching has serious limitations (7). Organic and human modes of behaviour are infinitely more complex than automatic systems because the former possess the margin of choice, the freedom to commit and correct errors, to explore unbeaten paths, to incorporate unpredictable accents with self-defined purposes, to anticipate the unexpected and plan the impossible – all attributes that no automatic system, howsoever efficient, can countenance. Unlike the man, computer has no qualities of leadership. It is the most obedient servant of man and has to be employed as such only. In human organisms, the whole personality may sometimes intervene to change the tempo or alter the basic pattern.

Comparing human instruction to computer instruction, one is impelled to believe that we have not simply to choose between computer instruction and human instruction; rather we have to supplement human instruction with computer instruction which has been essentially warranted by the challenge of a technological age and by the consequent subordination of the individual to the manipulated environment. Nevertheless, human teacher is essential either with or without a computer.

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III

SPHERES OF EDUCATION

13

A Case For Comprehensive Elementary Education

Education is essentially social both in principle and method: in principle because it cannot take place in a vacuum but in a group, in method because the teaching-learning situation is always social. This statement holds good also, because, men being social, can derive greater benefits from the education given to them in a social set-up. The teacher in a bid to educate the children meets them as human beings classed in a group having common aims and purposes. His effort, from the point of view of imparting effective education, lies in consolidating the class into a solid group. He does so, because he knows that learning is a social rather than individual activity and that the development and achievement of each child are conditioned mostly by the growth and progress that the group as a whole shows. Consequently, to begin with, he concentrates on the children's common interests and needs, instead of emphasizing their individual differences. There is perhaps a dire need to go slow on the modern psychology slogan of identifying and heralding individual differences. This need is also warranted owing to the educational requirement of shaping individuals for a democratic social order and a federated world order.

Later, as the teacher proceeds in his task and the work of the class goes ahead, individual differences raise their heads in terms of varying achievements that individual children make. Some may be good in reading, other above par in drawing, still others may

excel in languages. This is inevitable, as each individual is a unique personality within a framework of human commonality. This, however, should not confuse the teacher, nor force him to accept the aforementioned slogan of exploiting individual differences. He is not at all to see that the children who are better than others in a subject or activity flourish to the neglect of their class-fellows. Instead, he is to see that each child promotes and stimulates the work of the class as a whole, and that all contain the essential basic skills. Within an integrated group, when certain children so stimulate others, teaching-learning will forge its way ahead in the best possible manner. Education will take place so as to bring the educands nearer each other rather than put them asunder.

The teacher who approaches his task in this way has the conviction that all children under his care are educable, and that learning is meant to bring about human changes, not simply to acquire knowledge. Such a teacher has a humanistic philosophy.

This, however, does not lead the teacher to be oblivious to differences in achievements or needs, though it does lead him to treat such differences from the point of view of his own philosophy—the philosophy of integrating the human material by emphasising identities rather than distinctions, by reducing disparities in favour of raising high the level of all and sundry. He does not jump to the conclusion that Ram's poor attainment in languages is due to his "poor intelligence", but tries to probe into the real causes of Ram's comparative slowness to others and to see how he can be helped. Blaming intelligence would simply suggest that Ram's parents have done the wrong and that there is nothing the teacher can do about it. This would be a negative philosophy. Psychologists, while suggesting that there are mental abilities which are hereditary and which can be both classified and measured, have made a very innocent omission of not considering how we learn and change. All that they have perhaps established is that each child is born with a physiological make up which stipulates his development, which provides, as it were, the basis from which he begins. Their usual claim, that the child's mental capacity is shaped by his original endowment, is not so far proved by scientific evidence. On the other hand, there are scientific data to prove that there is a lot of plasticity, docility and potentiality in the higher nervous activity and that anything may always be achieved, changed for the better, if only proper conditions are there. The data go a long way to confirm the view that human beings are capable of modification, of

development, and that the school should provide conditions for human development in this sense. And these conditions, in the interest of integration and unity, should be common for all the children. For long, psychologists have tended so greatly and consistently to stress individual differences that we have almost shut our eyes to the obvious truism that all children, apart of course from those having serious physical handicaps, grow in conformity with a certain indispensable and fundamental pattern applicable to all human beings.

It is therefore very much vital that the conditions for the growth and development of all children should be largely similar. The school should give up its usual practice of comparing or discriminating between children, should discontinue treating individuals or groups in a different way. Reversely, it must find ways and means of helping all children to forge ahead on a common course towards maturity and adulthood. This task may appear easier in the sense that the teacher can think he would just cater to the general or collective requirements of children and would get rid of the educational demands of the gifted or the backward. This would be an illusion. The teacher's task, on the contrary, would increase manifold when he chooses to set the group, composed of individuals, on a common and integrative path leading to full and wholesome development of each within the well-knit group. This task would be both fruitful and rewarding in terms of the quality of products.

Sometimes a question is asked : "How can you ignore that individual differences are predetermined by birth or heredity when the children enter school with different levels of achievement in all activities, in reading and arithmetic." These differences primarily result from the nature and extent of the pre-school training the children have had and from the differing opportunities provided by different social classes. Teachers are aware of the fact that a child's mastery of any activity or skill is not automatic or instinctive, but is the direct outcome of sustained practice in and an organised learning of that activity or skill. Only continuous practice and applying himself to an activity will make the child good in writing, skilful in sketching, or efficient at the piano. Thus the level of his achievement at any moment depends not so much on his inborn potentialities, as on the extent to which these have changed through practice and learning. What matters therefore is the opportunities he gets for learning

different activities and the assistance he gets to master these and to develop new abilities or to make new attainments. This great task is done by the teacher in a very expert manner, and this is what goes by the name of education.

Whether the teacher succeeds in this aim of education depends on his attitude to his job, and more specifically on his attitude towards children. If, misguided by the theories of mental testing, he believes that the level of a child's attainment is predetermined by the nature of his innate abilities, he would do nothing more than try to actualize the children's inborn abilities. His belief that a child cannot outstep the limitations imposed by heredity will put a stop to what he would otherwise do in terms of providing new learning experiences and developing new abilities. Education, in this way, would have a bad start and would not be creative. On the contrary, if the teacher has a conviction that a child's abilities would develop through the school's effort to control and capitalize upon his activity, then his attitude will be quite different. He believes that the sort of teaching he does has a lot to do with educating the child in the real sense; so he will exert himself to help the child rise above himself, achieve more and more, and tide over difficulties in his way. Thus alone will he achieve this aim for all children in the school, in spite of initial individual differences between them.

Classifying children into different groups on the basis of their mental status, as revealed through mental testing, only perpetuates these initial differences, even creates new ones. This practice tends to defeat the very purpose of education.

There is a need to reorganize the elementary school with a view to providing opportunities for all children to develop their abilities. The present-day schools provide such opportunity to some only, and this creates disparities, individual differences and ultimately the so-called unique personalities which are too diverse to come close to one another either emotionally or psychologically. For this reason, the classification of children entering the school for the first time should not be based on mental testing. Let them be put in different groups according to the teachers and rooms available. The fact that each of these groups will include good achievers and under-achievers should cause no consternation to the modern teacher who, somewhat over-impressed by pseudo-psychology and its ultra-statistical concepts, is anxious to grade pupils on the basis of mental test scores. The task of the elementary school is to lay the foundations

of learning, and not to whip up the fast or slow learners in a race. It is to provide suitable atmosphere and opportunities for all-round development to all. It is to help each one climb the educational ladder and raise his level by pre-planned steps and to see that each child participates in the march.

'How can common education be planned' is a ticklish issue which cannot be solved without deciding some basic principles. Firstly, reading and writing should be taught to all children at the same age. This would be a starting point for the common education to be embarked on later. At present, some schools teach reading at five and some at six, so that the children at seven are a heterogeneous mixture of good and poor readers, which fact poses a problem for the teacher who tries to tide over the difficulty by placing the children in two separate groups. It is in the interests of children that they should know reading at seven, as otherwise they would be retarded in their progress ahead. In case there are in a school children at seven who are poor readers, special instruction in small groups every day can be given to bring them up to the mark. Individual attention, good teaching and incentive for achievement would serve the purpose. Thus, if all children in the school can read at seven, a common education is very much possible.

Secondly, the content of education or the subjects and the extent to which they should be taught must be the same in every school. At present, certain languages or even other subjects taught to a class in one school are not taught to the same class in a neighbouring school. This creates difficulties for both teachers and children at the secondary stage.

Basic subjects or skills should be taught by the same methods in every school—methods which serve the purposes of common education. Future research might evolve such methods. At present a language is taught in one way in one school and in a different way in another. There is no doubt that differences of opinion on the question, 'What is the best method of teaching a subject', exist. Nevertheless, the same method used in every school would pave the way for smooth sailing of the students at the secondary stage.

Thirdly, and this is most pertinent in many of our schools, the numbers in the elementary classes must be limited to twenty or twentyfive. There is no denying the fact that individual attention or individualized instruction or even guidance to each is impossible in a class of hundred or even forty. In the expensive public schools, the

number of children never exceeds twenty. If the educational needs of children in these schools can be met only then, those of children in other schools can also be met the same way.

Fourthly, life in the elementary school must be rich enough to challenge the child's abilities and interests : this will ensure his development. Activities designed to promote group participation should be there to encourage socialization, sharing responsibilities and co-operation.

Fifthly, the school should provide a variety of activities, outside the domain of subjects, to initiate the child to his own culture and to the elementary knowledge of other countries, comparable to that of his own. This knowledge should be in the areas of elementary history, geography and science which are generally not taught at the elementary stage, owing to the fright that examinations may cause. Barring this difficulty, the provision of the said activities and knowledge would not go to waste, as the child at this stage is particularly curious, smart and receptive.

The view that the child should be left free to develop his abilities and to learn, because no one can change his potentialities sometimes tends to absolve the teacher of his responsibilities towards elementary education. Even if the teacher wedded to this view is particular about being vigilant, while the child is left free to pursue the unknown path of education, or about pulling him to the right path when he goes astray, he is not doing the task assigned to him. The teacher must teach the children. He must do formal class teaching. The child is too inadequate to choose for himself all that he should learn, including social skills, habits and behaviour. A systematic process of education conducted by the teacher step by step is indispensable for proper learning and growth. Some habits are to be broken, new ones to be formed; some interests are to be developed, others to be got rid of; faulty methods of solving problems need to be replaced by right methods. All this can be done by a teacher's teaching, his active and deliberate guidance and his directive control of the child. If freedom to the child implies his freedom of expression and a recognition of his individuality with a view to catering to his needs, aspirations and goals, it is well and good. If, however, it means undirected and unsupervised education, the sooner we stop such education, the better for the child. The school is a skilled agency meant to make children skilful and educated; for this teachers must teach.

If all elementary schools thus agree on minimum educational standards, keeping the above suggestions in view, they can lay the foreground of an education envisaged to help all children most in their growth and development. The children coming out of such schools would be most suitable and receptive to the secondary education in store for them.

A Case For Basic Education

Gandhiji was essentially educationist in the sense that he assumed the role of an educator in every campaign that he took up in his life. His battle for independence involved educating the masses in non-violent suffering and organization for a noble cause, educating the rulers to do the right to those who would willingly suffer for the right without even thinking of causing suffering to their masters. He taught peace through peaceful methods, peaceful actions and peaceful agitations. Various Satyagrahas and movements that he initiated and enthusiastically led involved, among other purposes, a deliberate purpose of educating mankind in the art of living and letting others live, in tolerance, in service of humanity, in liberating the oppressed, in renunciation, in spiritual development. Basic Education too was a movement directed to the same ends. Gandhiji thought of it because he saw in it the potentialities of a good national education which could rightly determine the course of non-violent struggle for freedom, which could safeguard and consolidate the freedom once achieved and pave way to peaceful realization of a social order, guaranteeing equal opportunity to grow one's full height and freedom from oppression and fear to all. The then-prevalent educational system was "life-destroying" and was doing more harm than good to the rising nation.

Craft-centred Education

Gandhiji was certain that education imparted through the basic crafts could be a real and national education. Craft, therefore, is the most vital basis of instruction in Basic Education. Craft could remedy the defects in the then education. All those educators and others who, in the name of modern education today, tend to abolish or reduce the element of craft from basic education need to know this hard fact.

Gandhiji, however, warned that basic crafts would be popularised and welcomed by the teacher and the taught only if those in power, such as Congress ministers, legislators and officers, set an example by doing manual labour, be it for just an hour every day. How far has this warning been taken note of by those who matter can be estimated from the fact that of all the tenets of basic education craft is the one fired most and adopted least.

National Pattern

Basic Education was conceived to cause a silent social revolution and to establish "an equilibrium between body, mind and spirit." It was meant to prepare the nation for the task that lay ahead and to enable it to enjoy the fruits of independence. The then education aimed at perpetuating foreign rule, at exploiting the population and producing a class of aliens in their own homeland. It had already made millions of Indians English in ideas, in intellect, in likes and dislikes, and in morals. It had deprived India of her wealth, undermined her culture, neglected her languages and created a slavish mentality in her folk. Rooted in India's soil, Basic Education alone could suit India's genius. It could drive national moorings deep into the land of our birth, thereby laying the foundations of nationalism. It could, through its fulfilment of the aim of Sarvodaya Samaj, promote oneness of humanity thereby developing internationalism among Indians. Both these ends, though the latter follows the former, are perhaps seriously lacking at present. No magic or step other than that of Basic Education could do the needful.

Basic Education, according to its great founder, would make child healthy, bold and keen to serve. This child would be innocently free from meanness, deceitfulness or other exploiting trends of the competitive industrial world. He would voluntarily serve the rural people and be contented with his lot. He would be an example for them to follow – an example as man of action, worthy and virtuous enough to be imitated by others. A Basic teacher is a craftsman-educationist with whom his wife and children would share his labour of love and service. This would promote cooperation between the teachers and the masses and spread the message of Nai Talim in the whole of India. Has the Basic education, adopted for the last several years in our schools, produced such youngsters, or have the institutes training Basic teachers produced such teachers as were envisaged by Gandhiji? Answer to these questions would be a pointer

worth attending to by all those who teach or are concerned with teachers for Basic education.

Those who denounce spinning in favour of other modern crafts need to know what Gandhiji said when asked as to why he preferred spinning to agriculture. According to him spinning had greater educational potentialities than agriculture and this fact was too important to be ignored because Basic education is not merely to teach an occupation but, through it, to develop the whole man. He preferred spinning for its simplicity, inexpensiveness and universality as much as for the fact that it could solve the problem of mass poverty and unemployment. Those who criticise the choice and preferences of crafts envisaged by Gandhiji should know that the educator of educators based his choice on factors psychological, educational and rational.

Self-sufficiency

Gandhiji wanted the entire school population, be they teachers or pupils, to work and labour together to make provisions for all they might need. This would bring in agriculture, weaving and other crafts. He thought it necessary to attain self-sufficiency which alone could make education free and universal, and which could make the country independent in her requirements. Perhaps there could not be a better plan than this in the impoverished economy then obtaining in India. The state today provides free and universal education from its own funds, but the fact remains that the state is finding it difficult to afford this fully. It seems that the profits and fruits can accrue more naturally and more surely from their own source than from other sources. Free and universal attribute of education can be realized from the sort of character of education we introduce rather than from the money provided by the state. Basic Education having a characteristic of self-sufficiency can safely be depended upon to realise this attribute.

All the same, Gandhiji's Nai Talim did not begin and end with spinning or agriculture and sanitation. It must cultivate and purify the intellect and develop both body and spirit. If it does not, the Basic teacher has not done his job. Be that as it may, the Basic teacher should rise up to this expectation which evidently appears no more than a pious cliché to him because he has neither the will nor the skill to so accomplish.

Religious Education

On the question of religious instruction Gandhiji said that a secular state like ours should not concern itself with religious education as such. Let those, who want, give such education to their children themselves provided it does not violate law and order and morality. The state could only teach ethics common to all religions. Public men who today exhort the Government to impart religious education should note this fact. A secular state grants freedom of religions. If she undertakes religious instruction it might amount to or seem to amount to interference.

Non-Violence

Non-violence permeated every aspect of Nai Talim. Violence had no place in this as in other movements enunciated by Gandhiji. When asked how to deal with problem-children without violence, Gandhiji replied, "Begin by ruling out corporal punishment. Instead, you should create a living bond of identity with the child under your care and punish him by inflicting a penalty upon yourself. When the child sees the teacher vicariously suffering for him, it will have the desired effect upon him and this will reform him." Teachers who, in spite of their use of the knowledge of psychology in order to rule out occasions warranting corporal punishment, feel obliged to slap or cane the children at times need to realize that it is something implicit in their own character — self-suffering, self-effacing and self-discipline — which can rule out violence from teaching.

When the state wanted to start residential schools meant to prepare children for military careers, Gandhiji took it as an affront to Nai Talim, the core of which was non-violence. He did not want the state to resort to this step until full independence was achieved. He asked the Talimi Sangh not to start such schools. Violence, preparation for it, even thought of it, was not acceptable to Gandhiji, no matter how laudable was the aim to be achieved.

Coeducation

Those who wanted to introduce coeducation in schools, but not in training schools because girls in training schools were fairly grown up, were reprimanded by Gandhiji who said that we should give up this sex mentality and have coeducation everywhere even at the risk of some accidents which could take place anywhere. Intelligent,

pure and selfless teachers imbued with the spirit of Nai Talim can rule out all such dangers. This psychological and bold approach toward the question of coeducation needs to be owned by the present day educators in India who, in spite of various conferences, surveys and researches on this issue, are on the horns of a dilemma.

Gandhiji was against all artificial taboos in the matter of sex morality as these cause hypocrisy, perversion, mental upsets and ill-health. Modern psychology confirms this belief. As parents and teachers we should remove the contradiction between our inner life and outer, we should bring about a synthesis of freedom and inner discipline, and set an example in right conduct and behaviour for the children to follow. Freedom should result in moral discipline, not in moral indiscipline, simply because external shackles stand discarded.

Thus Basic Education, if properly conducted, could serve as a panacea for all ills seething the body-politic of our education and society.

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A Case For Teacher Education

Education is a Science

Pedagogy has undergone tremendous changes in our time. Teaching that once was an art is now a science built on firm foundations, and linked to psychology, anthropology, cybernetics, linguistics, and many other disciplines. Nevertheless the application of pedagogy by teachers is in many cases still an art.

The concept of education, as also the field of application of education, has greatly expanded. Pedagogy no longer is giving instruction to the young as in the past. It includes the cultural process of bringing forth and developing all potentialities of an individual. This implies that education does not merely involve the realization of certain goals or forming the future that we imagine today; rather education is a cluster of difficult trades, an aggregate of processes based on specific techniques and action with individuals and groups, that is organised, planned, controlled and evaluated. This kind of science of education warrants that practitioners of the trade be professional. But sometimes the continuation of education as a science and teachers as professionals may degenerate into the so-called applied science, a sort of rationalized improvisation which we would not like education to become.

Pedagogy is no longer a philosophy of education that heralds objectives, but provides no concrete means of action. Nor is pedagogy confined to certain useful techniques. Pedagogy must attain its own scientific autonomy, which presupposes that it is an organized whole with its own specific aims. Again, the purpose of pedagogy is no longer to train children, but man throughout his life. As pedagogy is now a science for the training of man, its name should be andragogy as suggested by Pierre Fuster (2). Whereas, initial training was the objective of pedagogy, transition from the idea of initial training to that of continual education is the mark of ar dragogy.

Education Continues Throughout Life

Continual education is a complex cybernetic system, based on a "response-sensitive" situation comprising these elements: a learner whose behaviour may be evaluated and modified; a teacher, functionally speaking the educator; sources of structured knowledge, to be presented to the student or else explored by the learner to have access to necessary data; arrangements for evaluating modified behaviour, as also for recording reaction and the new behaviour that it stimulates. (3).

Traditional pedagogy did not differentiate adequately between educational methods and content in relation to the age of pupils and their intellectual levels. It frequently treated the child a mere undergrown adult. It even did not discern that adolescence was a specific psychological phase.

Genetic psychology concerns itself with distinguishing between the characteristics of people of different ages as suggested by Piaget (1). This has made modern pedagogy devise and apply educational methods and content suited to the people of different age levels. For instance, studying young adults is far more difficult than studying children, for they are less creative and already belong to an organized society which channels them, applies brakes or arouses them to rebellion (1).

Teacher Training Be Made A Harbinger Of Change

Institutional pedagogy aims to change "Instituted combinations" in school — that is imposed from without — into "instituting combinations", based on free exchange between individuals and leading to self-management. It operates by replacing permanent action and the school master's intervention by a system of activities, of varying intermediaries and of institutions which continually ensure both the obligation to carry on, and the reciprocity of, exchanges within and outside the group as suggested by Vasquez and Oury (4). These ideas are all the more important in teacher training colleges where adults are subjected to training. Adults in training college demand different teacher-learner relationships from those traditionally prevailing in school. Use has to be made of adults' specific motivations, each of whom brings into the learning process structured professional and cultural content. The teacher educator has to act as an inducer of change (like the psychologist with his patient) while members of

the group undertake to examine the study programme and find solutions to problems arising in daily collective life.

The teaching profession cannot fulfil its role in the future unless it builds a structure better adapted to modern educational systems.

Educational activities have both multiplied and diversified, leading to an increase in the number of educators. This increase is inevitable as also desirable in any modern system of education. The important thing is that increasing results corresponding to the increase in expenditure on teaching staff must also appear. The pity is that, until now, continual rise in expenditure on salaries has taken place to the detriment of spending on equipment and, of course, of spending on innovation and research which still occupy a back seat. We must, therefore, devise teaching methods which are as profitable as possible, if we wish to avoid recurring expenses reaching such a level that they prevent an educational system being modernized. This in fact would be the pre-requisite to enhancing the social status and giving greater value to the role of teachers.

Teacher Educators Must Anticipate Future

A task which has assumed greatest importance for educators today is to change the mentalities and qualifications inherent in all professions. Teacher educators should, thus, be the first to rethink and change the criteria and basic situation of the teaching profession, in which the job of educating and stimulating students is gradually superseding that of simply giving instruction.

Teacher training given today has to keep in active view the facts that teachers trained today will endure in the profession for another twentyfive years or so, and that the present-day divisions between formal and informal, school and out-of-school, child and adult education are steadily fading.

Conditions in which teachers are trained should be so changed that, essentially, they become educators rather than specialists in transmitting pre-determined curricula. Accelerated training must be followed by a continuous programme of inservice training.

Training future educators should be along two lines. Specialization should go to a fixed number of future professionals in pre-school education, school pedagogy, training of backward children, technical education, "andragogues", educating the gifted etc. Others should be trained as organizer-educators, including the general body of

teacher-trainees who, at least in theory, should be able to practise their profession with both children and adults, in school and out of school, for formal as well as informal education.

Besides, education will need specialists in teaching materials, in self-learning equipment, in the use of educational techniques and audio-visual equipment, in tests and vocational guidance, as psychologists, system analysts and special brand of administrators. Training of teachers must cater to these needs too.

The most fundamental change in the educators' training will be the one that is warranted by their changing task which in the future will be that of educating the personality, unrevelling the way to the real world.

Educators Must Involve Society In Education

Education is developing so fast and so continually that it has become a function of the entire society. As such, larger and larger sections of society have to take part in it. This would be a powerful stimulant to socio-economic development and would spark off a great movement in favour of social justice.

Specialists from other professions (workers, technicians, executive and professional personnel) should be called to work with professional teachers. Besides, the cooperation of pupils and students should be enlisted in such a way that they teach themselves while instructing others, and become imbued with the idea that acquiring an "intellectual capital" enjoins upon its possessor the duty of sharing it with others.

The purpose of having these non-conventional educators is to increase the number and diversity of auxiliaries and volunteers with children in schools. These auxiliaries will fulfil as many non-instructional responsibilities as possible so as to 'free teachers to teach' and to supplement teaching practice through contributing from their own experience. For this, they would be given supplementary training required for the execution of educational tasks.

The volunteer aid suggested above may be (a) a mother may be asked to perform such functions as correcting papers, checking written work, reading to small group of children, supervising children on the playgrounds, escorting small children to school, making instructional materials and the like; (b) specialists from the community such as salesmen, policemen, dairy farmers, handicraft workers, photographers, opticians can teach special skills in the school; (c)

older child can come to classroom of a younger one to hear him read or read to him, to drill him on new words, or to teach some other skill.

Teacher training has to be comprehensive, all-inclusive, ingenious and futuristic, if modernized, scientific and reality-oriented education is to be imparted and if the educand is to be oriented to face the hard tasks of the omniscient present and unpredictable problems of the inscrutable future.

National characteristics and international inspiration have made education very ponderous. New developments from science and technology have made it both complex and wide. To impart this kind of education we require educators, trained in contemporary educational strategies, having scientific frame of mind and overall perspective, capable of gauging, exciting and verifying prospects of the dizzying future. And to produce such educators we need teacher educators with a vision, having expertise in the methodology, content, and organization of modern education and a will to metamorphose the trainee educators into devoted and competent professionals.

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A Case For Adult Education

Need

School must continue until we have a society where people will go on being educated more or less continuously, for a long time or at intervals. As educators we must see clearly the image of education as a continuous project for society as a whole. Here comes the need of education for adults who do not enter the portals of educational institutions.

Education, it is claimed, comments national and social unity and equalizes opportunity, and school life promotes attitudes of solidarity and cooperation. This claim does not seem to prove true probably because a big chunk of population *i.e.*, adults, remains deprived of education and hence of the characteristics conducive to the said unity.

Seemingly, the educational process is limited, by choice, to the period between infancy and adulthood. At the same time we say that education should aim to provide pupils, on leaving school, with knowledge and skills which will stand them in good stead for the rest of their lives. The first view does not withstand the shock of contemporary psychological research, while the second seems to have been done away with by accelerated change. However, if these doctrines should continue to be upheld, it will be impossible to contrive genuinely modern methods postulating firmly that education must be designed not only for the young but must also provide means of enriching the human experience of adults, and that the process of schooling may not be a continuous one.

Modus Operandi

Institutional pedagogy, which starts with analysis of the sociology of institutions, is one method which is stated to be very effective in

adult education. This pedagogy aims to establish instituting combinations, based on free exchange between individuals and leading to self-management. It operates by replacing permanent action and the school master's intervention by a system of activities, of varying intermediaries and of institutions which continually ensure both the obligations to carry on, and the reciprocity of, exchanges with and outside the group (1). These ideas can be profitably practised in adult training, particularly in teacher training colleges, adult education centres and long-term courses. Adults demand teacher-learner relationships different from those traditionally prevailing in school. While training adults, use has to be made of adults' specific motivations, each of whom brings into the learning process structured professional and cultural content. The teacher seeks to stimulate change (like the psychologist with his patient), while members of the group take responsibility for research written into the study programme and for finding solutions to problems arising in daily group life (2).

New Trends

Education for such sections of populations as we excluded from traditional educational circuits is becoming imperative. We need institutions aimed at special categories of adults, workers wanting qualifications, professionals, executives and technicians on whom political or social changes suddenly impose responsibilities for which they were not trained or which technological changes have superseded. In this respect, some systems providing broader access to higher education are of special interest, such as Telekolleg (Federal Republic of Germany) or the secondary correspondence and radio school of NHK Radio (Japan), open University in the United Kingdom, which combines radio and television broadcasts, the use of special manuals and learning kits, correspondence courses, consultation of video cassettes, group seminars and summer institutes.

Life-long Education

Lifelong education (which implies that educational process must continue through adulthood) has now become necessary for many reasons. Firstly, human beings keep on learning and training themselves throughout their lives through such factors as the influence of the surrounding environment, and the experiences which mould their behaviour, their conceptions of life and the content of their

knowledge. Secondly, the old idea that instruction was for the young only and took place in schools no longer prevents people from conceiving of life-long education. Thirdly, people now believe that most men are not sufficiently equipped to face the conditions and vicissitudes of life as lived now.

Thus hundreds of thousands of adults need education, not only for the pleasure of perfecting their capacities or contributing to their own development, as before, but because the demands for overall social, economic and cultural development of today's society require the maximum potential of an educated class.

Life, with its more complicated tasks, is bringing pedagogues face to face with new problems. Education has to face the challenge of coordinating two irregular, unequal processes *i.e.*, on the one hand the avalanche of scientific information, the ever-intensifying differentiation and integration of modern knowledge, the growing enrichment of science, technology and art with values of great significance, and on the other, the process of school instruction in which everything is limited by the bounds of the textbook, the bounds of time which cannot be extended at will, just as the possibilities of developing man cannot be extended to infinity (3).

Lifelong education, which more than anything else is to be intensified at the adult level, may meet this formidable challenge. Gradually, this education has taken into its fold multiple aspects of personality—mental, social, emotional, aesthetic and political—within an integrated vision of educated activity. Again, it also includes the entire educational process, from the point of view of the individual and of the society. While helping the child to live his own life as he deserves to do, lifelong education aims at preparing the future adult for various forms of autonomy and self-learning. It means that the future adult education requires many wide-ranging educational structures and cultural activities to be developed for adults. This education is a process in the human being, who thereby learns to express himself, to communicate and to question the world, through his various experiences, and to fulfil himself increasingly. Sociology, economics and psychology tell us that man is an unfinished being and can only fulfil himself through constant learning, and hence education must take place at all ages, and in all situations of life. In fact the true nature of education is that it is total and lifelong, it transcends the limits of institutions, programmes and methods imposed on it by tradition and by the sands of time.

Schools have a great unifying effect on children in the sense that education moves children into a coherent moral, intellectual and effective universe composed of sets of values, interpretations of the past and conceptions of the future. Adult education may have a less unifying effect, because it may be independent of and opposed to public education. Nevertheless, it does contribute to awakening civic spirit and a sense of social commitment and arousing interest in others.

Education is life and life is education. It is with this belief that lifelong education has been conceived. It is an integration of learning into our work and our leisure. It is a many-sided education not only for children but also for adults who, at any age, may have the need of it. It is a process of man's growth toward fulfilment as an individual as well as a member of many groups in a society. It is concerned with the total man, not just man as a product. It makes for creative living, not just materially productive living. It is based on the belief that people will spend periods throughout their lives in some structured learning experience, that they can leave and return as they deem fit and as they can meet certain pedagogical demands.

To make lifelong education relevant for adults, there will be a close relationship between lifelong education and assumption of future trends in society and there will be use of a variety of ways to meet needs ranging from formal to informal programmes, as also the use of modern technologies. In this system, elementary and secondary school systems have to be made more open and welcoming to people of various ages who need the skills associated with these educational levels.

Open Education System

An overall open education system is another way of educating the adults or of continuing education through adulthood. This system helps learners to move within it, both horizontally and vertically, and widens the range of choice available to them. Learners can enter freely at various stages and leave at many different points. They may undertake higher studies without having previously completed the traditionally necessary period of formal schooling. There is plenty of opportunity to move from one branch of education to another and to enter and leave this or that walk of productive and community life.

Thus adults get many practical opportunities for combining

work and education. It will be acceptable to interrupted studies between one cycle and another or even during one course. It may be psychologically and culturally beneficial. This is called recurrent education which may resolve the contradiction between institutionalized and non-institutionalized education by integrating them into a coherent system in which they complement and supplement each other harmoniously. Every adult will be able to re-enter the educational circuit in the course of his active life.

Individual Development For All

The normal culmination of the educational process, if it at all culminates in our life time, is adult education. For many adults, it is a substitute for the basic education they missed. For those who received only a very incomplete education, it is the complement to elementary or professional education. For those whom it helps respond to new demands which environment makes on them, it is the prolongation of education. And for those who have already received high level training, it offers further education. Thus it is a means of individual development for everybody.

Adult Education—Not Mere Literacy Drive

The old view that adult education is just literacy training is no longer valid. In fact literacy training has been separated from, or even opposed to adult education. It has also been sometimes considered as a rival to primary education. Learning to read and write was contrasted with other means of acquiring knowledge and skills. For long, literacy was regarded as an end in itself. It has been found that educational effects of literacy drives were short-lived, that literacy was not integrated into the immediate environment and that the individual development, which was the chief objective of adult education, was not achieved through literacy.

All the same, in areas of widespread illiteracy, adult education programmes must include a strong literacy campaign. The programmes must first aim at functional literacy among strongly motivated sections of the working population and then at mass literacy when conditions are appropriate for active large-scale participation by the people. Literacy action, motivated by and directed towards employment possibilities, must be integrated into the development objectives of the state. Mass literacy campaigns must help people change their environment.

Adult education body cannot be limited to rudimentary levels, or confined to cultural education for a minority.

Adult Education—An Autonomous Concept

Adult education is decisive in the success of school children for the rising generations cannot be properly trained in an illiterate environment. As the development of education depends on using to the full the capacities of all people able to teach or help train others, the number of professionals engaged in working towards educational objectives can only be increased by promoting adult education. To do so, adult education and education of children and the young should be two separate parallel concepts in the service of common educational objectives. Adult education can no longer be a fringe sector of activity, it must be given its own proper autonomous place in educational policies and budgets. This implies that school and out-of-school education must be linked firmly together.

A giant effort is needed to strengthen and expand adult education. Steps need to be taken for utilizing existing primary, secondary and technical schools for adult education, increasing the number of adults admitted to higher educational institutions, creating special adult educational centres, encouraging self-education, developing spontaneous initiative and making all educational means available to the greatest number. Yugoslavia's workers' Universities are adult education centres where a number of such steps exist. Educational technology too is amply employed for adult education. Examples are the Tevec Project in Quebec (Canada) where television programmes, central discussions arising from the programmes viewed, sampling surveys, transmitting and acting on subject matter are presented, and in Russia, daily television programmes, radio broadcasts, bringing eminent scientists, pedagogues, psychologists, subject specialists on the television screen.

Adult Education—A New Perspective

Why must adults learn

Learning, if understood as the reception and mental adaptation of impression, information, and experience in leading to an extension, deepening and change of knowledge, concepts, attitudes and behaviour of the learner, must be continuous which implies that the adult must learn. To be able to lead his life and shape his environment consciously,

with understanding, on the basis of his own insight and judgement, he must learn, over and above the cognitive domain, modes of action and behaviour, skills and techniques which he needs for effective participation in the shaping and developing of his living conditions and sphere of activity.

Learning operates mainly in a relationship of tension between two factors: the acquirement of the knowledge and experience gathered by former generations, and the pursuit of personal interests, creative needs and concepts of aims, necessary for the development of individual talents and potential. This tension is between conformity, which is necessary for the order and continuity of communal living in a society, and self-religion, tradition and independence. In this tension each generation and each individual must grow, find his way, learn, and seek a satisfying and meaningful perspective for personal life.

Adult learning both voluntary and unique

The young learner has to build up extensively on that which the previous generations of teachers and parents passes on to him. Adult learning does not really fit into this classical picture of human learning in the context of change and conflict of generations. The adult has already left school, that classic learning situation, which preserves the standards achieved in the fields of civilization, technology, economics, politics and spiritual-cultural values. Having completed his basic vocational training, he goes on learning, nevertheless. Instead of joining the camp of the knowledgeable experienced generation of parents and teachers, who devote themselves in them tension to the task of reading, advising and bringing up the new generation of their own children, the adults of today must carry on learning for the rest of their lives. Adults, however, want to learn and are able to learn differently from how they learnt earlier as children and teachers at school, in higher education or during vocational training. They are no longer bounded nor should they be, by curricula and context plan framed by teachers as in the case with young learners. They wish, and are able, to decide for themselves what, when and how to learn.

The demand to make decision oneself, at grassroots level, instead of being directed from above as in the case with adults, a closer connection between learning and work, favour the institution of open learning, a flexible combination of work and learning, where

work environment is a learning environment. This kind of learning can be particularly useful for a combined maintenance and improvement of vocational qualities, personal self-realization and for the acquisition of new perspectives, concepts and living patterns for work as well as for leisure time. The change in the ratio of work to leisure, time in favour of the latter, the increasing unemployment, and the shortening of working hours also favour further education of the adults. This is possible only if the continuous education is open to the interests, needs and particular situation of the adult learner.

In open learning, the aims of continuing learning can be articulated ad hoc by the adult in each individual case, according to personal interests and needs. By formulating his own objectives, he can get a clearer picture of the usefulness and aims of the studies he intends undertaking, which in itself already implies a considerable learning process. This is important because in adult education the only type of learning which has any sense in the long run is that in which the learner can directly recognize some purpose and meaning for his personal situation.

The adult learner is less interested in curricula-oriented or subject-counteracted courses which convey the same content for all participants of the relevant group of learners in the same way, at the same time and at the same place. He mostly needs, and is looking for a more direct approach to that information and to those learning aids which he precisely requires in his specific context of life, work, experience or thought. He does not so much need schools into suitable hours for classroom teaching, but rather local education centres with libraries, mediatheques, advisory services and individual working places, which should be available at any time to everyone interested in learning something.

Developing competence and readiness to learn

Adult learning requires a new approach to the condition of development of learning competence and readiness to learn in adults. The adults' learning competence, contrary to the opinion shown in the deficit theory, does not automatically finish with increasing age; on the contrary, his mental capacity for reception, adaptation and assimilation is very much dependent upon the intensity and duration of the appropriate incentives, demands and challenges. Increasing age causes a substantial change, not reduction

in appropriate intellectual dispositions. Even when, for instance, the capacity for remembering and the speed of learning decrease with age, this may be due to the fact that older people have a routine, hard-set environment, lacking in stimulation. On the other hand, however, the cognitive comprehension systems may, with increasing age, constantly differentiate and refine themselves further, and the exactness and reliability of the learning may increase, not because the person is becoming biologically older, but because he is becoming richer in his experiences of assimilation and reality. Therefore, in adult education, those learning stimuli and possibilities for learning, which further much a refinement of the already developed systems of comprehension and assimilation, are particularly fruitful. Learning, in fact is also a question of organisation, *i.e.*, the efficiency of an attempt at learning depends to a great extent upon how well the learner is able to organize and order his learning matter, how adequately he can see it in a more global concept and integrate it into the context of his own imagination. The learning competence of those adults who have already developed such systems of organising for their learning can thus be furthered, to a great extent, by planning learning stimuli, and learning aids in such an open way that the individual can assimilate them faithfully, according to his own specific status of mental organization and thought.

How ready adults are to learn depends not so much on age as on the conditions of learning. Adults in general are not very ready or motivated to alter patterns of behaviour, which they have developed over the years gone by and which lend them a certain behavioural confidence, simply because some teacher requests it of them. On the other hand, the stimulus of a new situation or an acute practical demand can mobilize special driving forces and move for learning, especially when appropriate concrete possibilities for assimilating the matter learned also emerge in the close context of their own lives, work and interests. Adults are, thus, no less ready to learn than young people, but their motivational situation is more closely linked to real practice and personal situations.

Learning Methods

Learning grows out of a personal assimilation of that which has an enriching effect upon the learner from outside. The different impressions are thereby taken up more or less selectively on the basis of personal structures of expectation, and are then subjectively

weighted and ordered. The more the individual context of imagination is filled out and enriched by experience, the more decisive it will be for man's life, and the more strongly it will mould his new experiences in its own turn. In other words, the context of previous learning experience plays a special role in adult learning, because in general the adult has already collected many experience, and is therefore reliant upon the context of imagination and experience which has been won from his life as the fruit of his prior learning. Nevertheless, the attitude towards learning, the motives for learning and the learning methods of adult learners differ greatly from one another, depending upon whether the goal is the knowledge of concrete facts or of abstract rules and theoretical structures, whether a more authority-oriented, subsuming, instrumental learning is desired, or a more analysing, discovering learning which searches for meanings, or whether a more competition-oriented, a more cooperative or a more autonomous type of learning is preferred, or upon other factors. For effective learning, it is essential to offer the individual learner, according to his prerequisite, expectations, interests and aims, a personal possibility to develop a life which, for him, is satisfying and meaningful. Otherwise learning can become merely a tedious grind, or else not even occurring at all.

Adult education should not restrict itself to furthering specific talents or else to providing an education for specified professional areas. Our annual system of education caters to a one-sided section of about one tenth of the human qualities which are important for society (*i.e.* abilities, skills and talent that satisfy academic standards) and which lead to the ascent to higher branches of social hierarchy and to corresponding higher financial remuneration. Open learning for adults must keep itself free from such one-sided grammar-school and academic standards. It should, instead, remain as open as possible for every interest and every talent which can be improved by further education. Adult education must, therefore, unlike the traditional school, provide an open learning-space where the individual can learn that which interests him personally, and which further the development of his skills and abilities. Further learning must intensify practical application, more precisely it should offer a way of solving a practical problem, a means to the end of coping better with life. Such education should take place in close connection with his day-to-day life. In other words, the various places of learning or natural possibilities for learning in the life of a community must be exploited

for adult education, whether theatres, clubs, factories, museums, workshops, hospitals, interviewing of experts, taking part in forums, group tasks, study projects, libraries etc. Adult education must offer courses where radio or T.V. programmes are recorded on cassette or video tape, discussed critically and generally integrated into a greater frame work of understanding. These aids are needed for the critical processing and comprehending integration of information supplied by the mass media and as to meet people's intellectual needs in the age of mass-media.

Adults have a more marked individuality than young peoples. They have developed, under the influence of differing specialization and environmental conditions, in varying directions and away from each other. They are more different from each other than children and young people. Their personal expectations and styles of learning, the individual way of perceiving, integrating, training and remembering is more varied. Again, adults are fixed to a greater extent than young people through their experiences, their ideologies of life etc. They have developed beliefs, habits and prejudices they are not readily prepared to give up or have questioned. Consequently, adults' willingness and possibility to learn depends on their finding motivating, useful learning conditions which are to match their individual interests and requirements. Hence the need of individualizing adult education.

Adult education thus should cater to the greatly differing learning interests, ways of life and learning equipment of the population. It opens new vista of instruction and training for the folk who left school long ago.

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A Case For College Education

Youngsters entering college tend to believe that college is more or less like a high school with a little more liberty and charm. But it does not take long for them to realize, to their astonishment, that there are many differences. A glaring difference is that of the psychological environment which in turn determines many other differences. The new entrant, to his chagrin, finds that he in college is subject to much less supervision, but is expected to be more responsible, self-dependent and mature in his actions. He looks askance to observe that he dare not show disregard of certain conventions including that of completing his assignments which are fairly heavy and which warrant greater intellectual effort, creativity and personal competence. He does not fail to perceive that he has to put forth great effort to keep up his old standards of achievement and greater still to improve upon them. He is soon called upon to rise equal to the occasion in the matter of adjusting to an adult society which (unlike his home or his school) is not indulgent and in which like other members of the group he has to compete for love and affection and for being distinctive.

The greatest significance of college education is the change that it brings in the students' habits and attitudes. "Even a few years in the college are found to have wrought the change," observe many investigators who have in the past tried to assess attitude changes among the University scholars (5). In work sense, sense of responsibility, habits of buying and spending, toilet habits, reading interests, social participation, the ways they look at life, their responses to day-to-day problems—in fact in almost every conceivable art of life the college students suffer changes in attitude. It is, however, difficult to determine how much of these changes is owing to the influence of factors other than college experiences.

Changes in Personality

Sanford and others in 1956 (4) affirmed on the basis of research that college years bring about a fundamental reorganization of personality. They compared freshmen and seniors in a college (Vassar) in respect of their responses to psychological tests, and found the seniors more tolerant and flexible, more inclined to do independent thinking, more realistic and self-reliant, more inclined to reject traditional values, and less cynical about people. Later Webster (7), comparing the reactions of a number of groups of students at various stages in college, found that seniors were generally less homogeneous and less conforming than freshmen, though they were more consistent than freshmen in their greater tolerance for non-conforming behaviour and ideas. Obviously college experiences seem to infuse freedom, dynamism, confidence and ways of life which the school does not seem to foster. Probably the school experiences by their very nature are too orthodox and limited to cause such changes in the students' attitudes.

The writer having observed and thoroughly known ten school students through their three high school years attempted to assess them again after they have had two years at the college. They were found to have shed most of their earlier diffidence, rigidity and childish habits as also their poor expression, aloofness and carelessness. Self-dependence, seriousness of purpose, fearlessness and neatness of appearance were found to be some of their gains from the college years. Individual differences in terms of more or less of these changes in the students' attitude and behaviour were, of course, apparent.

Lehmann (1), in a study of the freshman class in Michigan State University, found that changes in attitudes may be greatest during the first two years. Hence, his recommendation that colleges should provide students enough opportunity in the first one or two years to change their attitude, along desirable lines. Since students in these years can assimilate most from college, they may be given benefits of diverse learning experiences, contacts with distinguished scholars, intellectual environment and the like. Lehmann (1) saw these changes during the four years at college : greater proficiency in verbal problems; greater rationality, greater scientific attitude and less stereotype in beliefs; greater receptivity to new ideas, proneness to change views on what is important in life; greater flexibility and less authoritarianism; moderate attitudes toward people of different

racess and creeds; change of views about standards of behaviour; giving more importance to achieving group and inter-group harmony; more concern about living for the present, rather than the future; questioning absolutes about moral and religious conduct. Whereas, some or even all of these changes in attitudes may be caused by college experiences, some degree of some or even of all the changes may be motivated by other factors especially the factor of maturation and growth. Quite a few of "Lehmann's changes" attributed to college experiences are the changes determined, at least to some extent, by maturation stimulated by added doses of age and experience which are coincident with the students' advance toward college. Home environment, social education and allied factors, improvement in all of which can also contribute towards such changes as Lehmann has contemplated to be due to college, may be still other factors responsible for change of college students' attitude.

Performance in Examinations

Lehmann's (1) finding that students who were flexible, adaptive, and receptive to new ideas achieved higher grades in their college examinations may be owing to the fact that college examinations evaluate work, to learn which the above qualities are more amenable and helpful and the reverse of qualities much less helpful. The writer in a similar study observed that the students having these qualities did better in examinations which were comprehensive and in which the questions were indirect and intelligent, while the students who were rigid, inadaptive, and unreceptive did better in limited examinations in which direct, definite, questions requiring definite, mugged-up answers were asked. The latter type of students were also found (by Lehmann as well as by the writer) to be more inclined to teacher-centred teaching methods (which appear to be anachronistic at the college level), greater social distance between teacher and student and avoidance of discussion and seminars.

This seems to suggest that the nature as well as the degree of the change that college tends to cause may also depend upon the personality pattern with which the students enter college. Some are so built as regards their personality attributes that assimilation of experiences liable to foster change of attitudes may be next to nothing, nominal or just fair. Others are so made in their personality make-up that dynamism and open-mindedness abound in them with the result that their personality goes on and on being unfolded with

every experience, however little, at the college. To an extent, therefore, the potency of college education to influence attitudes and behaviour may be somewhat limited.

Impact of College Faculty

The writer, in a cross-sectional study of student attitudes of about 150 teacher trainees in the Government Training College for Teachers, Jullundur, from the year 1957 to the year 1961 found that the college faculty also influences attitudes and motivates changes in them. The college teachers' own attitudes, values and goals were at least partly imbibed by the students especially when the former impressed the latter as serious-minded, highly intellectual, enthusiastic personages of lofty principles and unimpeachable integrity. Comparatively young lot of teachers who were not so competent, mature or balanced and were carefree, not-so-diligent, fickle-minded and self-centred individuals, who cherished neither high thinking nor some enduring principles, did not seem to influence student attitudes appreciably. Somewhat similar evidence was provided by Thistlethwaite (6) who studies changes in level of aspiration of 2400 men enrolled in 140 colleges and universities over a two-year period. Thistlethwaite observed that the students' level of aspiration was more likely to go up when their instructors manifested enthusiasm, supported humanistic values, showed preference for independence in thought and behaviour, favoured high levels of achievement, generally encouraged student efforts, and showed non-conformist values and behaviour. Again Newcomb's (2,3) research showed that marked changes took place in the attitudes and values of college students during their four-year stay, changes brought about partly through contact with the norms of the student group and partly through the influence of the faculty.

All in all, it may be agreed that college education holds a great significance for the student and that it influences the latter's behaviour and attitudes as also his values, thinking and other personality qualities. It is college education which tends to make students move in an intellectually and politically more liberal direction, which renders them more independent, non-conforming and achievement-oriented, or which turns them more impersonal, status-conscious and vocationally-oriented. Hence, the need for college faculty to be vigilant, methodical and determined in the matter of providing the students with learning experiences, extra-curricular activities, example

and precept of those worthy of imitation, in fact the entire atmosphere of the college, with a view to bringing about desirable and enviable changes in the student attitudes and the ways they look at life and its problems.

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A Case For Correspondence Education

The complexities of life in the modern world demand that education should be a continuous process characterized by a lifelong exposure to the widening bounds of knowledge, increasing mastery over the natural environment, and an adaptation to the rapidly changing social environment. This demand can be met only by correspondence education. Its need exists in every society and every country, and most of all in developing countries. In such countries, the system of formal education has left untouched a large segment of the population, whose educational needs, including the elements of literacy, have to be met through programmes of correspondence education. Moreover, in these countries there is an under-functioning of large sections of population in every facet of life, private or public, social or economic, agricultural or industrial, and in as much as there is an educational component underlying such under-functioning it becomes a task for correspondence education to take effective action to remedy it. The purpose of this education is to fulfil the needs of society for the education of its citizens throughout their life span, enabling them to realize their full potential as individuals and to contribute effectively to social and economic development.

Distinct Characteristics

Before we think of ways and means of making correspondence education more effective, let us discuss some of its distinct characteristics which need to be taken care of because it is these characteristics which need to be strengthened before we look forward to the modern gadgets like TV in a bid to make this education effective. The basic philosophy underlying correspondence education is simple and is no alien to Indian tradition. It is : Education is not a once-for-all process, no one is too old to learn, no one is too big or too small

to learn, no one is too knowledgeable to learn, inability to be in full-time residence at the campus should be no bar to learning and the adult is conscious of the cost of not learning and even if he is not, he could be made so. The history of correspondence technology is as old as the history of postal services. Teaching cannot be confined to formal education. When a father or mother writes a letter full of advice and suggestions to his or her erring son or daughter, it is also teaching through correspondence. Classic examples are Plato's epistles to Dionysius, letters of Elder Pliny to the Younger Pliny, letters of the Late Prime Minister Jawaharlal Nehru to his daughter Indira Gandhi.

Correspondence education is a method of instruction in which correspondence is the means of communication between the student and the teacher. Instruction is a conscious, deliberate effort to affect or alter an individual's environment so as to cause a change in his behaviour or make him behave or perform and do so under specified conditions. We subject a learner to lectures or class discussions so that he can pass an examination or become a better citizen or can appreciate art under given conditions. To this definition of education if we add that this deliberate effort must be carried out by means of correspondence, it becomes correspondence instruction. Although most correspondence instruction is carried out through mail, this is only one of the several possible means.

Another distinction is that correspondence instruction is only that instruction which is offered through correspondence, that requires interaction between the student and the instructing institution. Thus a programme in which a student receives a lesson and is required to submit a response for evaluation by the instructional body will only be called correspondence instruction.

Five specific components of correspondence instruction are: specially prepared materials, written in self-explanatory fashion and arranged in a series of lessons, supplementary printed and other materials, a series of exercises to be worked out by the student, evaluation of these exercises by a competent instructor with the student being informed of the evaluation and final examination over the whole course. It is these components which need to be considerably improved upon in the first instance.

Thus student-teacher interaction is the most necessary part of the instructional process. In fact many problems, advantages, and failings of correspondence instruction can be directly related to it.

Its technical name is feedback. It takes place in two directions: the instructional institution first supplies the specially prepared materials to the student who in turn provides feedback for the instructor by turning in work-sheets, problems, quizzes, or other kinds of written assignments. These responses allow the teacher to evaluate the student's progress and also to evaluate the effectiveness of the instructional materials used in the first stage of instruction. The instructor reads and evaluates the student responses and provides feedback to the student in the form of written commentary, quiz cores, further study suggestions, encouragement, and the like. Sometimes machines or computers are used instead of instructors, most frequently in cases in which large numbers of lessons must be examined. This feedback is the *sine qua non* of correspondence education and this has to be made effective most of all.

Thus correspondence instruction functions as a method of instruction. It is essentially a method. There is a popular misconception that correspondence instruction is different in kind from resident or institutional instruction. This simply is not so. Correspondence instruction shares the same goals and the same educational philosophy as many different methods of instruction. It differs from them primarily in the means, in the method itself. Correspondence instruction and other methods are not mutually exclusive or necessarily inimical.

Resident instruction refers to that instructional method which relies on the student's participation in an institution's resident (intramural) programme. This participation in the programme of a new environment will demand certain behaviour. Lectures, seminars, laboratory sessions and traditional classes are all familiar components of the resident method of instruction. In resident instruction, an institution is a particular supplier of instruction; in correspondence instruction, an institution will be any organization which sets out, perhaps among any activities, to supply correspondence instruction. Extension courses refer to courses offered by a resident institution for students not in residence. The institution extends its instructional function beyond its walls. Continuing or correspondence education indicates instruction offered primarily to those who cannot participate in a full-time instructional programme.

That correspondence instruction makes an important contribution to educational instruction today is shown by the fact that at one time three million students were enrolled in correspondence education as against five million seeking education in resident colleges and

universities in the United States. In fact correspondence instruction responds to specific needs that regular education cannot meet.

Correspondence education originated in 1870 in the United States when a rapidly increasing population, industrial revolution and the increasing role of women in society exerted pressure on conventional education. New needs for both general education and technical training added to the strain. Correspondence instruction arose to meet this need. Three different kinds of demands on the country's instructional resources stimulated the rise of correspondence instruction. The first was educational which aimed at producing a literate individual, aware of the problems of his society and prepared to deal with them. The second was training which was meant to produce highly trained individuals with a specific proficiency which is a key to production and profit. The third was general which intended to satisfy an individual's curiosity or impart him a desired or a new skill. These demands implied that education must reach all and sundry. Equality of educational opportunity, that the democratic principle warranted, gave further fillip to these demands. It was desired that education must be extended to everyone, no matter how humble his birth, no matter where he may live, and no matter what his reasonable aspirations may be. This requirement seemed beyond the capabilities of the existing system. Correspondence instruction was one solution. It helped to serve the educational needs of all those who were unable to take advantage of resident education. It helped professional associations, big business, industrial concerns, government and the armed forces to fill their demands for trained or educated personnel. It helped universities to offer instruction to individuals who were unable to participate in other educational programmes or who chose to satisfy their own needs or wishes through correspondence study. Acceptance of this instruction was slow. Started by the daughter of a Harvard University Professor for a small group of followers in 1873, this instruction now reaches over four million students every year in the USA.

Ways and Means to Make it More Effective

The acceptance and stature of correspondence education depends upon several factors, chief amongst which are financing a correspondence instruction venture, selecting a staff, attracting or screening out students, creating a favourable image and operating successfully within institutional limitations.

Teaching by correspondence requires highly specialized skills. The distance between the student and the teacher makes special demands on correspondence staff. Consequently a skilled staff is of critical importance.

The correspondence director needs special qualities of foresight. He must predict the behaviour of a group of students he never sees and probably little knows about. He must plan courses and specify course objectives for a heterogeneous and geographically diffused group. He must be able to run his programme on a tight budget and be good at devising alternative solutions when the best appears to be too expensive. He may have to develop bargaining skill to convince his superior of the value of correspondence programmes and to persuade competent teachers to devote some of their time to correspondence instruction. He must also have the ingenuity to overcome any obstacles that might prevent his programme from achieving the objectives set for it.

The lesson writer must be sensitive to his special task. In correspondence instruction, the burden of the actual teaching function rests squarely on the written work. The writer must be able to prepare clear and authoritative texts and syllabi; ambiguity, poor exposition, or inaccurate material can be disastrous when there is no teacher present to modify, clarify the written text. The expert lesson writer can predict students' questions and answer them in the text. The correspondence teacher must be as knowledgeable as the resident teacher. But he must be able to evaluate a student's progress from a limited written response and determine what additional help the student may need. Often the student is taught by at least two teachers, the lesson writer who provides course materials and the teacher who receives the student's work for evaluation, who gives his comments on it whatever further teaching is necessary.

If correspondence courses are to stimulate creativity, teachers of such courses must be carefully selected. In addition to being better informed and more highly educated than the students, they must be at least as intelligent, perceptive, and capable of creativity as the brightest of their students. As some of the students are likely to be very bright indeed, it is essential that the teachers be of very superior intellect. The papers submitted by students should be read by highly qualified teachers and not by sub-professional assistants.

Correspondence instruction can perform certain instructional activities better than traditional methods. Secondly, it can instruct in

some ways, places, and situations in which no other method can instruct at all. In some ways, correspondence method has definite advantages which benefit the student, the institution and the entire educational system, *i.e.*, it is more (1) flexible, (2) economical, (3) psychologically sound, and (4) instructionally effective than other methods.

Flexibility : In resident instruction the student is to conform to certain institutional demands. He must be at a specified place at a specified time in order to participate in the instructional process. The intellectual level and the rate of advancement of the course are arbitrarily fixed. Correspondence instruction is much more flexible, permitting the student to find his own level, satisfy his own instructional needs at his own pace. He can choose when and where to study. Instruction reaches him at the farthest place wherever he is tied or even when he moves from place to place. Not all students learn at the same rate. In this education we meet the demands of each student. Waste resulting from holding a fast learner back because class cannot keep up with him or from foolishly trying to push a slow learner beyond his capabilities, as happens in resident education, is avoided.

Even the individual does not learn all subjects or all lessons at an equal pace. In this method he is free to devote as much time to each lesson as he needs to understand it. The fast and the slow learners can determine their own working speed.

Economy : Costs of buildings and maintaining resident facilities are avoided, though other costs for supplying quality materials, superior teaching are sometime exorbitant. Operating costs, though more than in resident instruction, are chiefly towards providing quality instruction which is satisfying. Economy of time is also there; the student may work whenever he wants, fitting time in around other activities, putting period of convalescence (after illness) to good use; housewives with small children may continue their studies while raising a family, studying in between their other occupations.

In corresponding programmes, employees can complete education or training without leaving the job. Dual goals of continued production and continued training are compatible. In the USSR, workers satisfy their own instructional needs and help the economy develop at the same time.

Psychological Soundness : It is well suited to the psychological needs of the former drop-out and to the radically different needs of

the aggressive seeker of knowledge. The drop-out or flunk-out from college desires denied academic studying and regain confidence. College does not take him back or he cannot overcome the feeling of failure associated with resident instruction and does not want to enter college.

There is no class with which to compete and no classroom to evoke memories of past failures. The correspondent student can choose his study environment and work quietly in his own way. He can prove himself by performing well.

Many students have a great fear of embarrassment or failure which keeps them away from performing well in resident classes. For fear of making an error, a student may never participate in class discussions and thus never get adequate feedback in his performance. Correspondence education largely avoids this fear of failure. No one but the student need know how well or how poorly he does. The student is encouraged to study for his own benefit, not to impress others. A student who does well on correspondence programmes displays a certain tenacity and ability to follow through that stand as good recommendations of the student's ability to work.

Instructional Effectiveness

This is due to:

Highly motivated students who will learn in almost any instructional situation. Best available method in many particular situations. Rigour of independent study and the necessity for putting questions and answers into writing make it most effective. Such practice forces the student to clarify his own thinking and do a more thorough job when studying by correspondence.

A few other instructional advantages make it still more effective:

1. The student must express himself at every point in the course; more thorough preparation is needed throughout the course.
2. The student does his own research and checks his own work; this requires initiative and persistence and results in self-discipline and self-reliance.
3. The student has a greater opportunity to present the subject-matter fully and to write understandingly, which requires clear thinking.

4. The students in doubt are more willing and ready to ask questions as they go along.

Correspondence education has a bright future because the educational requirements of the country cannot be met without it.

Shortcomings

Lack of personal contact among teachers and students is a towering obstacle to effective instruction in correspondence; working at a distance, slow student-teacher interaction, lack of counselling and guidance, no witnessing of performance (both students and teachers learn from watching each other); inflexibility in revising courses; inability to regulate the student's behaviour and the quality of his work from a distance; maintaining standards – these are some other shortcomings.

Learning by correspondence consists of basically self-study and requires a measure of self-discipline and skills in learning which the ordinary workers or students (in correspondence education) do not possess.

Some more drawbacks of correspondence education are : dependence on written word which is the only means of communication; written words are inflexible and often dull, even inadequate; aural or visual learning is denied; looking at examples or listening to explanations is not there; there is no imaginative exploration because of rigid written syllabus; no laboratories, libraries, gymnasiums, theatres, or rooms of tranquil studies. Hence the importance of and need to make postal teaching foolproof.

Personal contact programmes, in which teachers meet students, go over the entire courses and remove students' difficulties, are most vital. These are of enormous benefit to the correspondence student. Occasional week-end seminars and mutual visits lead to visual and aural contacts that are extremely useful.

Institutions imparting corresponding education should consider population explosion and the changes in the structure of knowledge. Both will have profound influence in the shape of instruction in the future. Correspondence instruction does have an important role to play in providing instruction to a population with varied demands and varied capabilities. New media need to be introduced in correspondence education to meet new challenges in education. They include audio-tape, films and slides, television, video tape, programmed instruction, computer-assisted instruction, telephone and radio.

A Case For Extra-Class Activities

In a secondary school, extra-class activities comprise that area of the total curriculum which includes experiences the typical classes do not provide, such as assembly programmes, inter-school athletics, intramural sports, dramatics, work experience, camp fires, clubs and all other activities that help children grow in different aspects under the expert guidance of the school. It is these activities which in fact produce an inimitable artist, an insightful leader, a sagacious administrator, a national sportsman, a brave fighter or an international scout. Hence, their importance in education as also the need of continuously evaluating them in terms of sound criteria.

Does an extra-class activity contribute to the realization of an educational aim? This is a vital question, answer 'yes' to which merits sponsorship of the activity by a school. An activity is valuable if it contributes to the constructive use of leisuretime by enriching a student's life in the present and future by inducing him to cultivate the habit of participation in healthful sports, to develop a worthwhile hobby, or to develop a lifelong avocational interest in art, music, drama, or literature. The activity which motivates or reinforces a student's work in school by providing him (through club programmes or educational excursions) concrete illustrations and applications of the learnt material is worth introducing.

To make extra-class activities an essential part of the curriculum, these must also, like the new course in social studies, Mathematics, English, or art be approved by the faculty and board of education, the approval being based on their potential merits as additions to the school curriculum. Once approved, the school must, like the academic courses, introduce them and evaluate the student's performance in them.

As extra-class activities are educative, allowing or denying participation in certain activities, like enrolling in certain subjects,

should be an important function of the guidance programme or of a guidance-minded teacher. The number of activities in which a student participates should not be governed by a blanket rule, but left to the direction of the counsellor who always acts in the best interests of the student.

Participation in extra-class activities should not involve so many special fees or additional dues as to make the activities inaccessible to any student. Researchers of participation and non-participation in extra-class programmes have shown a close relationship with the socio-economic status of home.¹ They have also shown a markedly higher per cent of drop-outs among students who could not afford to participate and therefore wish to avoid the embarrassment of repeated reminders of their financial stringency.² Many boys and girls from poor families drop out when they think that their poverty (*i.e.* the poverty of their parents) will prevent them from maintaining themselves on a social level with their fellow students. And this maintaining means paying for a multitude of goods and services that are important to the adolescent sensibility—admission fees for dances, parties, dramatic performances, laboratory courses, orchestra instruments and uniforms, workbooks, pens, caps, gowns, and the like. In fact our supposedly free high schools are loaded with “hidden” tuition fees which poor parents can’t perceive when they seek their wards’ admission but learn to their painfulness as the children progress from the eighth to the eleventh class.

As educational opportunity is to be equal, extra-class activities must be either free to all the pupils or so inexpensive that no pupil is prevented from participating in a variety of these activities. In an American school where all extra-class activities were made free for all schools, the holding power (which prevents drop-outs) of the school increased by about 16 per cent after 3 years.³ Though increase in holding power cannot be attributed to a single factor, eliminating the costs of extra-class activities had a great deal to do with the school’s holding power.

As every experience results in learning, the experience of excluding a student on financial grounds from an extra-class activity results in concomitant learnings which are contrary to the purpose of education and to the basic concepts of our society. More precisely, the student develops the negative feeling of deprivation and the positive effects of what may be called contamination. He interprets his experience as the school’s avowal of his inferiority to the pupils who can afford

these extra expenses. Such a pupil starts believing that his school does not regard all students as equally worthy, but on the contrary values haves (those with money) above havenots (those without money). He learns to regard himself as inferior, as a second class student of the school and a second class citizen of the society which swears by democracy. Gradually he learns to regard this practice — unequal educational opportunities for him and his more fortunate classmates — as proper and inevitable. Whether he accepts this experience or rejects it, he is certainly learning that the school is a hoax when its spokesmen assert their obeisance to the laudable ideal of democracy in education and affirm their dedication to the admirable principle of equal educational opportunity. Again, the students who can afford to participate when some of their classmates cannot are likewise acquiring undesirable concomitant learning that they are superior to many of their fellows and that the practice of discrimination on the basis of wealth is proper. Whether they accept or reject this situation they too, like their less fortunate counterparts, start learning that the school is a humbug when those incharge profess one thing and do the reverse. Many a cynic and a snob are perhaps the products of this unfortunate practice in some schools. Things in India, however, are fast improving in this regard as the state is fully alive to the need of providing equal educational opportunities. Rather weaker sections of society are being particularly looked after.

Whereas the academic curriculum and the need for its constant revision and evaluation are often highlighted, the case of extra-class activities which is a vital area of the school curriculum is lost by default. Extra-class activities pave the way to complete education, to the making of the man and to the development of a creative society. The schools must institute these activities.

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IV

PSYCHOLOGY OF SOME PHENOMENA

20

Psychology of Attitudes

You may regard a person as kind, cruel, diligent or careless, as he betrays one or another of these behaviour qualities. It is his behaviour unto other people and things which is an index of his attitude. Attitudes thus are basic concomitants of one's behaviour. Emotions, being a necessary accompaniment of all human experiences, affect an individual's thoughts, interests and ideas, which in turn influence his overt behaviour and likewise shape his attitudes.

Certain foods are tasty and satisfying to us. Some works of art may appeal to us immensely. A subject may interest us much. A person may impress us a good deal. A musical item may fascinate us. Such foods, works of art, subjects, persons or music arouse in us so great a feeling of satisfaction and pleasure that we tend to repeat our associations with them. This is how positive attitudes are developed. On the other hand, some other foods, subjects, persons affect us differently and annoy us so much that we tend to avoid them as far as possible. This may form negative attitudes.

The same or similar experience may at one time delight us and at another time annoy us. For example, on a hot day after we have had a strenuous game, a hot shower might be annoying, while it might be welcome in winter.

Feeling or emotion, though sometimes weak, is rarely absent in an experience. We do not prefer to change a house in a given situation, or we do not act in a particular manner because the chosen form of behaviour is at least slightly more pleasing than the one not chosen.

Different persons may react differently to the same or similar situations or experiences. A play may be very pleasant to one person and very annoying to another. It may be because patterns of feeling-tones, developed over a period of time, direct a person's emotional reactions towards any one experience. Our attitudes are based on these patterns of feeling-tones.

Attitudes may be described as inner stimuli of attraction or repulsion that direct manifest behaviour in a particular situation. Our attitude towards an experience affects our behaviour in one way or another. This attitude varies with our understanding and appreciation of the meaning of the situation and with our emotional reaction to it.

Attitudes, Not Innate

No attitude is innate or inborn. Experiences go to form attitudes, which are specific, dynamic and directed towards a person, an object or a situation. With proper care and training, a child learns to dislike dishonesty, lying, untidiness, rudeness or discourtesy. With improper example and precept or indifferent and rejective treatment of adults towards him, a child can also learn to appreciate and adopt in his behaviour these very attitudes. He can also learn to be co-operative, kind and independent. These and other attitudes stem from experiences that have been either satisfying or annoying to the child.

Healthy attitudes can be formed in children through careful planning on the part of parents and teachers whose responsibility it is to develop in children constructive behaviour patterns. Whereas some attitudes are taught, some others are caught. A child may form some attitudes without being conscious of doing so, as he does when unconsciously imitating the attempts of his associates, parents or teachers. Example is a powerful attitude-maker. That is why the adults, while assisting a youngster to form desirable attitudes, should not exhibit in their behaviour the kinds of response that are not worth imitating.

Suggestion also influences the direction and development of attitudes. A word, a gesture or a glance can act as a suggestion. A child's attitude towards his mother may be directed by the expression on his father's face when the child and his father are joined by the mother who comes home after a long period of separation.

Attitudes and Behaviour

Attitudes, being dynamic forces in life-situations, determine an individual's behaviour and exert a powerful influence upon human interaction. They provide a mental set-up to an individual experience, *i.e.*, in a conflict situation or when faced with a problem, the more intense the desire, the stronger is the accompanying attitude. Our attitudes are not constant towards a person or situation, though we may develop habitual attitudes towards such things as work, authority, religion or some concepts.

Attitudes influence our thinking in the sense that they motivate a selective process caused by the dominance of one idea over another. They influence our response in any situation. A child who is mentally and emotionally ready to gain information on a particular topic is likely to understand it more fully than would the child who is indifferent to the topic in hand. A child's intense desire to do well in the examination motivates him to grasp the matter that comes his way.

Behaviour Reveals Attitude

Behaviour, not words spoken or written, portray deep-seated attitudes which elude verbal expression. A behaviour pattern that reveals a real feeling of 'being sorry' or of one's distress in sympathy with another's affliction is more important and attitude-manifesting than mere verbalisms like 'I am sorry,' 'What service can I do you in this hour of peril' and the like.

One often meets individuals who express definite and decisive attitudes towards various life problems. When the time arrives to practise these attitudes, they may respond by behaviour that is quite different from that expressed verbally. There are persons who valiantly oppose flattery or hypocrisy when practised by others, but where they are themselves tempted to use these behaviour patterns, they refuse to recognize the demerits which they had earlier criticised in these patterns. A person gives his approval to an associate's behaviour, if such behaviour is approved by most members of a group, though previously he might have refused to approve it. At another time and in another situation, he might doubt his original disapproval.

Sometimes one may not fully understand the motives that govern his behaviour. That is why he is not able to distinguish between an

actual attitude and an expressed opinion. He fails to recognise his own attitude of cruelty, selfishness, insincerity or dominance, though his associates are aware of these socially undesirable behaviour traits and he too recognizes such attitudes when displayed by others; conversely, a person's consciously-motivated actions may be misconstrued by others. And if, luckily enough, an individual who is capable of objective judgement recognizes his actual attitude concerning a situation and the opinion he is expected to express, he may attempt to rationalize his beliefs or his actions to keep up the appearance of being above-board.

Not many individuals are willing to accept possible disapproval from the members of their groups for an honest and frank expression of an unpopular belief, and hence what they say publicly may differ from what they actually believe. Most people tend to avoid the arousal of antagonism towards themselves or to avoid the possibility of lowering their feelings of self-esteem among others. Hence their expressed opinions may represent mere verbalisation rather than deeply seated attitudes. There have been men and women in history who, endowed with great wisdom and an extensive experiential background, held firmly to their attitudes and beliefs. They expressed their opinions freely, in spite of widespread criticism and protests. Some of them fought for the acceptance of their opinions and earned success, others became 'prophets' whose opinions did not receive recognition for many years.

Though expressed opinions of some persons would seem to show recognition of others' rights and needs, yet their behaviour-expression of real attitudes is diametrically opposed to their verbalized attitude. Perhaps it is due to the fact that the young in the past have been encouraged and assisted to develop attitudes that stress individual self-realization rather than altruistic motives.

Changing Attitudes

An unpleasant experience may build an asocial attitude in a person, *i.e.*, a child kidded by the members of his immediate group may shun company. Further experience and increased knowledge may bring home to him that this attitude resulted from wrong or incomplete understanding. Consequently he may change his attitude. Such change, though not ruled out, is less possible in older people in whose case the attitudes tend to become permanent and deeprooted. Other factors which influence change in attitude are the home,

school, religion, radio, literature and the like, all of which direct the youngsters' interests, motives, and attitudes towards the acceptance of various life problems and values.

Values and Attitudes

Attitudes have social as well as individual implications. One's attitudes are linked in one way or another with his biological urges, his mental acts, his motivation, his verbal reactions, his general behaviour etc. All these factors function together to influence opinion and to reveal deeprooted attitudes towards work, towards community or nation and towards family life and marriage. One's attitude to work determines one's efficiency in the work according to various researches which studied the effect of attitude upon performance. The contented worker is one who is efficient. A negative attitude towards work can be improved by paying attention to such things as proper vocational selection, suitable preparation and training, good pay, helpful supervision, proper working schedules, sympathy and co-operation of fellow-workers.

Racial or national attitudes which tend to become strong and persistent and which always result from day-to-day experience may take the shape of prejudices which are inevitably reflected in one's behaviour. Ignorance and lack of appreciation of the values of a disliked group cause prejudice in the area of human relationships. No prejudices are inborn or inherent. Children accept other children who have interests similar to their own, irrespective of race or religious differences. But, as they grow, they are influenced by prejudiced elders and their attitudes of acceptance change to attitudes of suspicion and later to rejection of classmates different from themselves. Parents, educators and sociologists need to maintain an objective, unbiased attitude towards all groups of people, to rule out the possibility of presenting prejudiced attitudes which are too contagious to spare the young ones from infection. They should also try to counteract the influence upon children of prejudiced laymen, by encouraging among them wholesome unprejudiced attitudes towards all worthwhile people, irrespective of such differences as are based on national, racial or religious origin.

A study conducted by the writer to assess and compare the inter-personal values of Indians, Americans and Japanese revealed that there are more similarities and less differences among the values of the three nationalities. Knowledge of the similarities, if given to

children, and stress on the fact that people of all nationalities have many commonalities, would impress upon them that human beings all over the globe are not much different, one from another. This impression would bring them closer to one another. Knowledge of the differences in values would be similarly useful in that this knowledge would enable them to appreciate one another's standpoints in various political, economic and other controversies and to adjust themselves to diverse viewpoints and positions which in the past have all too often broken into wars, hot or cold. Educators should impart the results of such studies to the growing generations to further international goodwill and understanding.

Married life, for its success or failure, depends largely on the attitudes that the two partners bring to this new relationship. The husband and wife may have known each other well before marriage, having passed through the romantic period together, and still married life may be an utter failure. Married life warrants close intimacy and healthful marital behaviour which one or both the partners may be devoid of or which are seriously interfered with by such adolescent attitudes as self-centredness, disregard for the mate's interests or needs, extravagance, emotional instability, undue submission etc.

Parents' own married life and their attitudes as well as differences between the two parents' attitudes towards children determine in the long run youngsters' attitudes towards their future family life. Attitudes towards family life are also affected by such factors as late or early marriages, small or large families, the socio-economic status of the family, and the attitude of one or both the mates towards the sanctity of the marriage vows as contrasted with the modern superficial belief that separation or divorce is the best way out of marital conflicts.

Such is the story of attitudes, their formation, their reformation and their value. That attitudes develop is not untrue, that they may be good or bad is not false either. Good are the attitudes which lead to individual and social efficiency, those which bring man nearer to man, those which bring about national and international goodwill and peace, those which may lead to the ending of war as a method of solving international problems, and those which can help to usher in a golden era of "live and let live" in peace, prosperity, and happiness. It is to develop such attitudes that parents and educators alike should intensify their efforts and plan their programmes of children's growth and development.

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Backbiting: Its Psychology

Comparative Psychologists believe that animals use physical attack for self-defence, but the techniques of attack depend on the "sharpness of hooves" and the "strength of jaws." Man, being the most inventive of all, uses many subtle techniques and devices and possibly avoids physical attack because of some social considerations. He may not use any stick, spear, sword or dagger but still he can cause very grievous wounds. Even without any weapon "he can bite like a dog, claw like a cat, kick like a stallion, trade, insult like a howling monkey and squeeze like a gorilla."

We know that "in a civilized society adults are rarely beaten or knifed or lashed. More often they are hurt by attacks on their pride or status, on their desire for social approval or their feelings of affection for their families and friends. These kinds of hurts can be far more serious and more prolonged than most physical hurts." The weapon most commonly used to cause such "injuries" is backbiting.

The word "backbiting" means speaking ill of others in their absence. For the layman it is a very simple word and denotes a simple form of behaviour, but from the psychological point of view it is a very complex phenomenon and "has a cause, a significance and an economy." Social psychologists term "backbiting" as a form of delinquent behaviour and attribute it to a number of psychological factors which impel the individual to behave as he does. Children often fall a prey to the habit of backbiting, telling lies and other delinquent practices.

Modern psychology throws a flood of light on the underlying "mechanisms" of such behaviour. Let us enumerate a few of them as under.

Inferiority Complex

The child who backbites generally suffers from inferiority complex

"arising from conflict between the impulse to seek recognition and fear of hurt arising from failure frequently experienced in similar situations." For him backbiting is the defensive or compensatory behaviour and it is unconsciously determined. Sometimes normal feelings of weakness and helplessness reinforced by inferiorities like deformity or any other physical defect or strong feelings of personal inadequacies stimulate him to make efforts to secure superiority over others by damaging their prestige and mutilating their reputation by backbiting. It is interesting to note that the backbiter talks ill of those aspects of others in which he himself is the weakest.

Sadistic Tendencies

Sadism has been derived from the name of Marquis de Sade who was a prolific writer. He took great pleasure in dominating others by inflicting pain on them. The term has rolled down to us and we use it more or less in the same sense but for a definite form of behaviour. Today, by sadist we mean a deviant who possesses pronounced tendency of "bruising" others and rendering them helpless to get the peculiar pleasure. The sadist child has an intense desire to be dominant, at the back of which is the inner feeling of weakness for which the sadism is a compensatory phenomenon. Backbiter suffers from erotic inadequacies or has some sex difficulties which motivate him to hurt others to gain superiority and abnormal pleasure. Backbiting is essentially a defence mechanism for him. Sadism may be one of the causes though not the only cause of backbiting.

Aggression

Aggression means attack on the other with a "will to power over other people" (Adle.). E.E. Maccoby says that aggression is the behaviour that is intended to injure some one. Humans adopt quite a large number of ways to hurt others. These may be "bold and violent" acts or "sly and subtle" taunts. Some of these acts may be accompanied by rage or annoyance and some others may seem quite cold, complex and without emotion. Backbiting is a way of channelizing the aggression in a form which is generally cold and without emotion or at least it seems so. Psychologists are of the view that the sources of aggression lie in a child's house. Some parents, particularly mothers, who lack understanding, make their children aggressive. A child makes an unreasonable demand which his mother does not satisfy. He begins to cry and she says, "Go and cry, I do not care." The

mother gives advance signals of anticipating aggression on the part of the child. It also indicates that such behaviour would be acceptable to the mother and it is scarcely surprising that the child tends to come up to her expectations. Since aggressive behaviour in the child is the result of lack of understanding on the part of parents and faulty methods of upbringing, backbiting offers a channel to smoke out aggression in a cold way. Backbiter who is a victim of "loveless" care establishes peace within by "throwing out" aggression through the tongue. Hence a backbiting child.

Death Instinct

According to Freud, there is an impulse in man which stimulates him to 'destroy, injure and conquer'. "Turned outward it is the urge to destroy, injure, and kill". Finding something outside to destroy, it does not need to destroy the self. But, when frustrated in an external aggression, it is likely to turn back upon the self as a suicidal tendency. It is not limited to homicide or suicide but covers the milder form of aggressiveness, whether directed toward the self or toward external objects". In a backbiter child "death instinct" turns outward and expresses itself in mild tongue lashings.

Jealousy

Jealousy is "a complex emotional state involving a sentiment of hate by one person for another. "When a child is jealous of another child he would belittle the latter's achievements and ridicule him in his absence. He would not do so in his presence because of the fear of retaliation and of his being branded as "burner". He would take "shelter behind other person's back" and express his jealousy in the disguise of words.

Mild referential paranoid tendencies

According to Tredgold, when a child fails to obtain some coveted position, he begins to brood over his failure and thinks that "he has not received his desserts and has been unfairly treated. This feeling of injustice and grievance increases and, combined with his thwarted ambition and very often jealousy of his successful rival, overpowers his judgment and he gradually develops the belief that he has been injured deliberately and that there is a plot against him. He may even go so far as to make accusations to this effect. Or may develop feelings of guilt, inferiority and these may gradually cause him to

believe that people are making disparaging remarks, are shunning him and eventually they are persecuting him". Such an individual gradually develops paranoia. But before he becomes a "paranoid type" his false beliefs last for a considerable time and are even accompanied by ideas of reference *i.e.*, people are discussing him, and he himself as a reaction to his own false beliefs begins to talk ill of others in their absence. He cannot speak so in their presence because he fears that if he does so in their presence his abnormal vanity, conceit, ambition, jealousy, obstinacy and the tendency to harbour grievances would be found out. A backbiter child is thus a mild psychological case.

Encouragement

The backbiting child sometimes gets encouragement from those to whom he talks ill of others. The listeners may not explicitly encourage him to do so but their quiet receptiveness gives him an implicit incentive to make him feel that he is accepted one. He would naturally repeat this behaviour to feel accepted again. This encourages backbiting.

Backbiting, no doubt, is the result of many alarming causes and it itself is alarming for the one whom it concerns but it is not all bad. Ask the backbiter its advantages which he himself reaps. He would not tell you its uses but shall use you as the subject matter to feed the biting-tongue, "person-hungry", fame hungry, moral hungry and the like. Apart from this it is a form of adjustment which is economical from the Freudian point of view. A study conducted by the writer of these lines showed that girls backbite more than do boys and that children do so more.

Psychology of Drinking

It is often believed that indulgence in alcohol is a matter of habituation or of social usage. This probably is the philosophy behind the great tragicomedy of prohibition staged in our country today. If we think that by keeping individuals from becoming habituated to alcohol through removing the supply or issuing an ordinance or delivering a sermon alcoholism would disappear, we may be mistaken. It may in fact increase, and probably narcotic drug addiction along with it. On the other hand, to know just what happens when an individual drinks or drinks too much may have a more salutary effect.

A graded series of behaviours usually follows alcoholic consumption. This becomes evident when we learn what happens to the nervous system during such intoxication. Neurology tells us that certain parts of the brain are primarily responsible for certain kinds of behaviour. More precisely, intellectual processes are mainly mediated by the cerebral cortex, emotional processes by the midbrain and thalamus, speech processes by the broccas area, coordinating of muscles and maintaining of bodily equilibrium by the cerebellum, vegetative processes by the medulla and brain-stem and the controlling of heart and respiration by the vagus nerve — the brain parts following the word “by” existing in the order “high to low” in the verticality of the brain. It is further known that the higher parts of the brain exert some inhibitory control on the lower parts and that the higher parts are first affected by intoxicants. It may be interesting to know how each of these parts gets affected and leads gradually to the so called tipsy behaviour, when a drinker continues mouthing peg after peg of his favourite drink.

Cerebral cortex and the fibres of the frontal-thalamic tract first become affected by the alcohol. After the first two drinks or glasses he becomes uninhibited, talkative, more sociable and more emotional because he has come more under thalamic control. His cerebral cortex, which governed his intellectual functioning, no longer exerts

its inhibitory control and consequently the individual talks things devoid of reason or logic. With two more drinks his inhibitions may disappear almost completely, the cortical control of thalamic function is abolished, and the individual is almost completely emotional. From an individual previously controlled almost solely by the intellect, he becomes an individual almost solely controlled by his emotions. He becomes very gay or very depressed, very loving and amorous or quite prone to pick a quarrel. Further imbibing leads to partial paralysis of the speech centre and thus to the slurring alcoholic speech. The next to be affected by alcoholic poisoning is the cerebellum, the centre for posture coordination. With the ingestions of six to eight drinks, the individual becomes increasingly powerless to coordinate muscular activity. His emotionality and uninhibited behaviour of course continue with this loss of control over muscular behaviour. He may no longer walk in a straight line or talk straight. Rather he staggers, stumbles and minces his words. In the medulla is located a centre that controls wakeful consciousness. This centre is the next victim when the individual ingests more drinks. He may now go into a state of somnolence popularly called "passing out". But before reaching this stage he manifests much abnormal emotional behaviour. A friend of the writer tells that whenever he drinks too much, he becomes first lachrymose, then bellicose, although the lachrymose and bellicose states sometimes become inverted, and finally, comatose. The writer remembers seeing an avid scholar of English poetry weeping over the fact that Keats was dead. The queer thought that had occurred to this fellow after too many drinks was that poor Keats was dead and that he would never get to meet him.

At times, however, the results of drinking become more serious. There are cases where well-meaning friends catch hold of an acutely drunk person and pour further liquor down his throat, or where an individual attempts for a wager to drink a large chunk of strong liquor at a stretch. Now comes the turn of the centre of the vagus nerve (the lowest part in the brain anatomy described in para 2 above) to get paralysed. The heart and respiration previously controlled by this nerve are endangered and in some such cases lethal alcoholic intoxication occurs. From this analysis which of course does not make a happy reading, it is clear that the bizarre behaviour of the alcoholic is caused by the poisonous effects of alcohol on the nervous system, and that the end of alcoholic intoxication may be death.

Psychology tells us that the personality of the drinker is so changed by the ingestion of alcohol that his behaviour may undergo a major change. The behaviour may become antisocial and personality destructive. Those who have not personally experienced such behaviour may be familiar with it in their friends or, if they move in completely abstinent circles, from the moving pictures. The difference in the use of alcohol as a mild social stimulant and the abuse of alcohol as a psychic analgesic can only be understood in psychological terms. The presence of conflict in the personality, a purely psychological factor, may be the cause of the severe or chronic drinking. Thus the drinker psychologically is not sick because he drinks, but he drinks because he is sick. But as alcohol is socially permissible in some circles and socially demanded in others, the drinker does not look on himself as sick. Thus it is social factors which rule the roost in alcoholism.

Whereas disturbances in brain functioning are due chiefly to pathological states, which, if left uncorrected, are likely to cause permanent damage of the nervous system, temporary malfunction of the nervous system may be brought about by intoxicating processes that a narcotic drug or drinking sets in motion. Unfortunately the use of alcohol is so widespread among civilized people that about 65 per cent of psychotic individuals who seek psychiatric treatment are ill due to alcoholic intoxication. Since psychosis means a break of personality with social reality, only acute alcoholic intoxication can be called psychosis which disappears on the patient's return to sobriety. In fact, extreme alcoholic intoxication is said to be so common in the West that a great many individuals in western European civilization have had such a psychosis frequently or at least rarely in their lives. The frequency of the disease is very large in such social classes as the upper bourgeois and the lower proletariat. In these classes, a very large percentage of males and a fairly large percentage of females suffer from alcoholism which in several cases leads to both economic and social maladjustments.

The social and moderate use of alcohol, or even its occasional abuse which sometimes offers a necessary psychological analgesic, may not cause psychiatric problems. Some individuals who drink daily may be leading happy and successful lives. But this should not render us smug with the belief that drinking is advisable or that there is no harm in drinking. It is not advisable because its use is saturated with the possibilities of tempting its user to become an addict and to

draw from it vicarious satisfaction and false pleasure which in turn develop in him the defence mechanism of reality-evasion or escape when faced with stress or conflict. It is harmful because its physical effects on the organism are too baneful to be lost sight of.

The drinker becomes a psychiatric problem when he, through his drinking, creates unhappiness for himself and others and when his drinking is compulsive. He often has a conflict as to whether he shall drink or not and sometimes he has to have a drink when his better judgement tells him to abstain. He also tends to ingest alcohol in increasingly large doses. His efficiency in economic and social relationships is lowered. He loses jobs and falls out with his friends and family members.

Whereas a knowledge of all that happens to us and to our nervous system can go a long way towards making a drinker refrain from drinking, it can exert a forbidding influence on an individual who does not drink but can always fall a prey to a social get-together where drinks are not barred. Besides, social factors that make drinking common and prestigious cannot be ignored, if we mean to build a case for prohibition.

Psychology of Hobbies

Quite often an intense, convulsive worker breaks down or has bad moods. So many of our industrious and high-ranking men collapse, and have to be sent abroad or to a hill-station to rest their nerves, because they work so hard. Ordinarily the nature or the amount of work is not so much as would cause breakdowns so often and so severely. The cause lies rather in the feelings of hurry and having no time to oneself, in the tension and anxiety, and in the inner restlessness and stir which invariably accompany our work in this new, eager, hurrying world. Casualties of this nature ultimately owe their origin to the lack of time for oneself which, whether devoted to activity or rest, is quite significant for one's mental and physical health. Hobbies are the most important means of such activity as would provide rest and recreation from the work-a-day world. These, besides affording opportunities for the exercise of mental and emotional aspects of personality considerably benefit one's physical health. Recreation is something more than mere rest; it is meant to recreate the individual through the exercise of interests and potentialities which find little recognition or outlet in one's work. That is why hobbies, which provide recreation, to be most effective and purposeful, should contrast with the usual work-a-day activities.

Just as it is essential to extend our social horizons to enrich our personality, it is equally necessary to expand our occupational interests as occupation is a real source of personal expansion and self-esteem. To remain busy is a very important factor of human life. Those unfortunate persons who do not have to work, owing to retirement, retrenchment or any other handicap, are much to be pitied and sympathized with, if they do not have some hobby to divert their energies into useful ways.

The continuing need of a hobby becomes more vital as a greater proportion of our population comes to be classed as old. It is

thought by many that death may be hastened by retirement from one's occupation or profession, with the resultant feeling of lack of purpose or work which a hobby would adequately provide. It would be "Better to wear out than to rust out." In a sense, an interest in creative activities and hobbies is the surest security against the dissipatedness, dejection, lack of vigour, and mental depression that generally accompany old age or sickness. Sometimes we find that a person confined to bed for months by a serious illness or nervous breakdown happens to discover in himself artistic or literary interest of whose possession he had absolutely no knowledge. Had such a person developed the said interest as a logical end to his more serious studies, earlier in his life, perhaps he might not have suffered his breakdown.

Every human being has a fair amount of creative energy which is not absorbed by his professional business. We must all create something if we do not want to class ourselves as sub-vital human oddities. One who does not find some outlet, as may be provided by hobbies for this creative energy, cannot be happy. "The crowning fortune of a man is to be born to some pursuit which finds him employment and happiness, whether it be to make baskets, or broad-swords, or canals, or statues, or songs", says Emerson.

There should be no specific prescription as to what hobbies one should adopt. Whatever these may be, because these combine the physical, mental and emotional exercise of personality, they will be instrumental in enriching life in all its aspects. "The ugliest of trades have their moments of pleasure." No particular hobby—art or craft—can be stamped as the most desirable for all people. "One man's meat is another man's poison"; and hence the importance of testing for artistic aptitudes or discovering latent interests. Painting is a very valuable and respectable art, and yet a woman of fifty may prefer to make dolls or do knitting. All people need to be told that life offers self-realization and pleasure at every stage and that imagination is always at our beck and call for use. It is this imagination which would to a large extent determine the choice of our hobbies. Einstein's saying that "imagination is more important than knowledge" is more true in this case than in any other. "Imagination disposes of everything; it creates beauty, justice, and happiness, which is everything in this world."

A very sound advice in the matter of choosing a hobby is to carry out whatever seems palatable. If you ever feel like gardening, stamp-

collecting, cooking, reading, boating, painting, or doing embroidery, do what you feel inclined to. The notion that one must be talented to get satisfaction from a hobby stops many a potential artist from the enjoyment of their own creative urge. The main consideration is that hobbies should be interesting and enjoyable to the person concerned.

It is a sad commentary on modern life that the average adult is just running a mad race for power and money, without thinking of utilizing his leisure for acquiring cultural awareness or for practising an artistic craft. A proper use of leisure is a real problem that cannot be solved by temporary and false escapes like alcoholic excesses, or playing bridge which are poor and temporary substitutes for creative hobbies. In order to ensure a life of enduring happiness we should guard against such temptations as are not a true and lasting release from the boredom of empty life.

No one can afford to be without a hobby, and so long as one's hobbies are subordinate to his life work, the more hobbies the better. Hobbies are the greatest preventive against the boredom of age or the road of distress. A person with a hobby is never lonely for a long time.

It has been found by Boynton that hobbies have a definite relationship to the personality characteristics of children. The child having hobbies possesses a more extroverted personality than does the child who has little or no hobbies and whose attention is concentrated on self. Absence of a hobby is associated with a different and less desirable type of personality adjustment than is the presence of a hobby. The value of a hobby to personality is always positive. Boynton found that children of superior intellectual ability show greater consistency and diversification of hobbies than do those of below average intelligence. The former are most likely to participate in the hobbies of collecting, of playing musical instruments and of reading history, science, biography.

An adolescent selects as his hobby a constructive activity in which his achievements prove to measure up to his satisfaction. His primary interest in construction is not the use of what he makes but the pleasure he derives from the activity of making it. He never thinks of competing with professionals. He has a hobby simply because it is a pleasurable activity. Some of the hobbies that adolescents participate in are drawing, exploring through hitchhiking or travel, collecting, reading – adventure, mystery, humour, stories of athletics, of inventions, biography, history and travel – radio-listening and seeing the movies.

The school can contribute a lot towards encouraging the development of hobbies. A display of students' leisure time activities suggests hobbies for leisure to the individual who has found nothing worthwhile to do. Tales by pupils and outsiders on the subject arouse interest for owning certain hobbies. The teacher should indicate the leisure time possibilities of each of the school subjects – possibilities including all types of activities, mental, athletic, manual and social – so that each child can select those that fit his needs and his inclinations. Extra-curricular activities in school are an excellent source of stimulating wholesome leisure time hobbies, besides aiding personality-development in other ways. Pupils pass or fail according to the degree of success in mastering subject-matter without regard to their ability to succeed in worthwhile extra-curricular activities. It is high time that teachers got rid of the feeling that extra-curricular activities are frills, without much meaning to the child's development. Provision of paper and crayons or paints for art work and access to books on the reference shelf will help to develop hobbies of painting, reading and writing respectively.

An interest in a hobby, besides, one's vocation, fully satisfies one's occupational need. At the same time, hobbies perform a great task of bridging the gulf that lies between man's social and vocational worlds.

Illness: Its Psychology

Whereas great advances in preventive and curative medicine in the modern age have turned attention from the patient to his disease, psychology and its chief exponents have been tending to show the medicinists that a fundamental characteristic of any illness is the patient's response to it. It is this characteristic which explains the disparity in the effects of a similar medicine on two patients having an exactly similar disease in an equal degree, or which explains the differences in acuteness of the illness of two patients whose sickness from the medical standpoint is the same both in its nature and extent. The patient's response to his sickness varies with the nature of his malady and with the values he consciously attaches to the various parts of his physical constitution.

The old belief that sickness is a penalty for wrong actions may have developed partly because the sick person's anxiety may have stemmed from his feelings of guilt, so penitence was the means of allaying guilt and removing anxiety. Perhaps the ancient doctor had an astute and discerning understanding of such effects of illness as tear asunder the mental make-up of a patient.

Body Reflects Mind

Our senses, limbs and internal organs seem to be performing a physiological function only. But they, in actuality, also express and show our states of mind and even our social relationships. For an anatomist the arm of a living man as also that of a dead body is almost the same, a structure consisting of bones, muscles, veins, tissues etc. His own arms, however, carry much more meaning for him than the arms of a corpse, as much perhaps as a pianist's arms to the latter. In the same way, a wrestler places a very high value on his muscles and a woman on her face which she manifests as part of her personality. Thus the healthy parts of our body manifest the latent states of our mind; in the same way, the parts when rendered sick express, rather prominently, the inner conditions of the mind.

During the time we are ill, we, or in other words, our minds are irrevocably involved in illness. We do not then function or behave as we do when we are not ill. Our sensibilities undergo a change; our reactions to stimuli or ideas are different. Most of all, our self-esteem diminishes; the erstwhile assertion, "I can never fall sick," no longer holds true. We tend to behave like the young, more self-centred, dependent, fussy, insecure and diffident. We often become demanding and annoying to the people who look after us.

Besides changes in sensibility, we undergo changes during illness that are not detected by the usual medical examination. These changes may be in the percepts which we have formed of our bodies. We have a percept of ourselves based on our posture, a second percept formed by feelings of touch, and a third built up from what we imagine we look like. We perceive several of our limbs as separate bodies, strange and distorted in shape and colour. The disease may appear to be ghastly phantom or an altogether different phenomenon. An ulcer may be perceived to be an ever-bleeding boil. In a woman it may arouse infantile ideas of the female as a damaged organism, or she may regard it as a malignant growth betokening pregnancy. In a man the bleeding ulcer may arouse thoughts of femaleness. It is somewhat natural that when the real nature of a disability is vague to us, we are prone to rear phantasies which work overtime to fill the gaps in our knowledge so as to present to us a completely distorted, even inverted image, of the disability.

We may even misconstrue the doctor's genuine efforts and attribute false motives to what he prescribes or does in a bid to treat us. One patient was dead sure that the doctor had administered to him a wrong medicine, not intentionally but because he had made a different, not correct, diagnosis. Another patient cried hoarse saying that the surgeon had left the tongs inside his abdomen, not out of carelessness, but to check the bleeding of his ulcer. The third complained that a nurse who implemented a doctor's orders for dressing an injured knee had poured acid instead of spirit on the wound, not out of bad motive, but due to sheer ignorance. Such is the manifest content of minds latent with fears, hallucinations, and imagined beliefs when our bodies are beset with sickness of one kind or another. The mind is thus not so steeped in abstraction as we seem to think. It is inevitably affected by the body which we always regard as strictly material though it is not so.

Individual Differences

Distinct differences in individual reactions to illness also reflect the psychology behind the physical ailment. One patient becomes unduly curious or concerned about his disease; another is totally indifferent to his protracted, though dangerous, sickness; the third has assumed false gaiety, while still another develops constant depression.

There are patients who deny their illness or its acuteness. The blind person sometimes denies that he is blind or acts in a way that shows he did not recognize his affliction saying, "I cannot see because of tears in my eyes" or "because I am not wearing my glasses." Besides such explicit denial, another response may be implicit denial as is manifested by a brain-damaged patient who loses interest in his disability and shows changes in his sexual behaviour, has hallucinations and distinct fluctuations of mood. He may gossip out any aspect of his experiences, asserting, for instance, that he has two heads and three arms. Brain damage, whether in the frontal or parietal lobe, determines what is denied by the patient. What he would deny depends upon the states of his mind preceding the damage. Brain injuries cause psychological damage as a direct consequence of the injury. In aphasias, understanding of the spoken or written word is lost. In agraphia the patient is unable to write the word, in anarthria he cannot articulate it, while in agnosia he cannot grasp the meaning of sensory cues. Sometimes the "denial response" takes the form of showing that the disability does not affect him in the least, *i.e.*, an old man leaps up a flight of stairs to demonstrate his youthfulness; a fat, bulky man offers to assist in a task requiring physical skill to exhibit that his fatness does not invalidate him in any way.

Psychological Difficulties

Whereas, objective factors like medical disability, threat to life, danger of injuring a vital organ or function, or economic disruption affect our minds when we are ill, subjective factors which are personal and significant for us equally cause us anxieties about the illness. Both these factors determine what sort of help we expect from the doctors or nurses. While in hospital we tend to regard them as paternal or maternal substitutes whose reassurance and kind word we primarily need. We expect them to know everything about

our disease and its treatment; this explains why we make all sorts of queries about the disease to doctors, and even to nurses who are innocently bereft of any medical qualifications or knowledge. We want them to be ready and able to help us at any moment, and hence our frustrations when someone amongst them does not come up to our expectation.

Each illness brings its own distinct psychological difficulties. Nervous disorders provoke fears of control, of utter helplessness in the future. Bodily disabilities disturb our image of the body. Typhoid and chest diseases cause fears of life-long frailty and lopsided existence. Chest surgery may arouse deep-rooted fears of interference with breathing and the horror of death from suffocation. Loss of sleep, anxiety and restlessness following such surgery are the emotional hangover of the operation. Women who undergo plastic surgery of facial features are reluctant to bear children lest the protruding nose or any other characteristic they have got concealed might become manifest in the offspring. Anaesthesia may terrify one out of one's wits and may cause undue distress to the extent of death by psychological shock, if it is administered without making the patient mentally and physically ready for it. Loss of a limb brings loss of self-esteem which sometimes makes one willing to beg for a living. The more serious the disability, the greater is the feeling of helplessness, *i.e.* loss of a leg reduces self-esteem more than the loss of an arm.

Need for Sympathy

We can never have a thorough understanding of the disabled person unless we realize that he feels himself and is often so regarded by the not-disabled, not so much as a quarantined individual, but as a member of a disabled minority, who are at a distinct disadvantage as compared with the not-disabled majority. On seeing a lame person we never think of his intrinsic worth as a human being and just assess him in terms of his obvious disability, his surface value. We assume by implication that the lame person is inferior to us in other respects which are not obvious. It is here, and here essentially, that we need to put our thinking in order, to look at things objectively and impersonally, and to judge the disabled for what they are and not for what they are not. Depressed by their handicapped condition and discouraged by the contemptuous attitude toward them of the not-disabled, the disabled tend to accept themselves as inferior to the able-bodied whose judgements, even if wrong and

adverse, they accept. Consequently, they live as an isolated minority, they exist rather than live, like the back-racers in an athletic meet who claim, "We also ran."

They may not be able to do things for which their disability incapacitates them; they can very well appreciate this situation. But they are exposed to a greatly frustrating experience, when the able-bodied do not accept them owing to the clumsiness of their defect, or when the former overstate the handicapping influence of the defect. By so devaluing the disabled we are deprived of the valuable contribution that they would otherwise make toward the welfare of society. If their assets are recognized and they have the freedom to participate in every life activity except the one for which their handicap does not permit, society would be much richer and happier than what it is at present.

Should the patient be told about his illness? If so, to what extent? Telling him nothing, as is the tradition in England, is perhaps not in keeping with psychological requirements of the patient as also of his treatment. Telling him too much is dangerous. Some of us do not want to know the truth about our disease and may even regard a diagnosis as a death sentence. Nevertheless a good doctor knows the judicious limit to which he would go while telling the patient about the illness, avoiding ambiguous statements or technical aspects of treatment and not encouraging him to imagine the worst about his condition. He would not encourage undue optimism about the patient's future health. What must be told and what needs to be kept secret should ultimately be decided with reference to the nature and degree of the psychic-component which is present in every disease, physiological or mental. Future research would perhaps throw adequate light on this psychic component. The introduction of psychiatry in the medical sphere is a step in the right direction.

It is gratifying to notice that doctors have now started realizing that a patient's ailment has a psychological element which has its importance in understanding the etiology of his disease, in making a correct diagnosis, and in launching a suitable treatment. They take into consideration the fact that the patient's reaction to a medicine, dentistry or operation would go a long way toward his eventual recovery, and that his close co-operation is vitally needed in the process of treatment.

Medical science has made wonderful strides in eliminating and treating disease, primarily because it has drunk deep into the depths

of the body, its functioning, its wear and tear. Psychology as a science has yet to conquer and fathom the deep recesses of mind, to be able to know in fulness its functioning, its ups and downs and its involute relationship with the body. Future advances in psychology would perhaps fill the gap, and help the doctors in both diagnosis and treatment of diseases none of which is physiological alone.

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Psychology of Music

Music inspires man more than anyone or anything else partly because to music man's response is natural or spontaneous and mostly because music appeals to the core of his self, arouses his feelings and so stirs his being that he cannot help dancing attendance on it. It enthral him in such a way that he is almost unconsciously involved in it to the exclusion of all distractions in the environment.

Genesis

'Music descended from the gods or spirits,' thought the primitive; perhaps they were impressed with its transcendental quality without being able to understand the science of music. The mystic conceived music and emphasised its place in his philosophy. The philosopher studies musical experience with a view to explaining the beauty as such and the beauty in music. Metaphysics goes still further. It raises such questions as "Is there a musical mind and if so how has it come into being?", "What kind of mind gives rise to music?" No one has so far solved these very interesting questions though scientific analysis of music vainly attempts to do so. Philosophers who were adept in the art of music made wonderful contributions to the genesis and psychology of music. Later scientific approaches in the field of music brought in more reliable techniques, caused constructive criticism and dealt with the facts of musical as of other experiences at first hand. Consequently, the psychology of music gave place to the science of this great art. Human soul abhors science when the latter attempts to analyse or scientificise musical or other delightful experiences, but it is helplessly silent as science forges its way ahead to engulf, and thus lay bare, all that seems divine or unknown. 'What or who originated music', 'how its various forms or diverse instruments evolved', 'what different roles does music play', and the like are by now questions that dictate scientific research at the hands of a musician. The sensory aspect of hearing, the motor aspect of tonal

production, the organic aspect of musical feeling, the function of ear in discriminating minute differences of pitch etc. are the questions now causally explained by physiology. The phenomena of sound waves, which a musical voice produces, are investigated by physics. Lastly comes psychology which tries to describe and elucidate musical experience, analyse musical endowments, detect human urges which long for music and succumb to music, evaluate musical feelings and explain the development of musical capacity from infancy onwards. Thus all these aspects of music, for their origin, evolution and further development, depend, in the last resort, upon a musician who is scientifically-minded, receptive and enthusiastic. He alone can study all the different aspects in an inter-related way because for him more than for anyone else these aspects emerge in one unit which is music. Psychology at best is concerned with the behaviour of the human organism as a whole in response to music. This task, by no means ordinary, involves integrating the musician's findings and the listener's own in order to arrive at a more meaningful result.

Aesthetic Appeal

Music unfolds itself in the form of physical sounds which pass through the physiological organism and arouse psychological organism to certain sensory and emotional experiences. Again its reproduction and amplification involve memory, imagination, thinking and instinctual impulses. Physical sound thus leads to mental experience but the relationship, both qualitative and quantitative, between the two is neither proportionate nor positive. It is therefore difficult to say whether or not response to music would correspond exactly to the musical stimulus as communicated through sound. Be as it may, the fact remains that the sound, whether it has any physical shape or not, does stimulate the mind and may exalt it.

Styles and rules of musical composition, the theories behind it, and theory of aesthetic appeal are a musician's big role which is most creative. He has to analyse scales, look to consonance and dissonance, produce rhythm and ensure harmony. All these issues require scientific treatment at his hands. What response will a musical tone cause ultimately depends upon how well are these issues dealt with.

The composition and the sound having been determined, attention is paid to instil aesthetic experience which the musician enjoys when he gets inspired by his music and a listener receives when he hears

the music, interprets it or recalls it. The musician's aesthetic experience depends upon his musical thinking, the *trahce* he is in, his emotional upsurge, his values in life, his personality and the like. This is his concrete inspiration or feeling to which he completely submerges and becomes one with. How he injects this all-pervading feeling in his music depends upon him and his personality. A listener's aesthetic experience, on hearing the music, depends on his own musical aptitude, knowledge of music, intelligence, skill in music and other allied factors all pertaining to his personality. Some charm of the music is lost in the process of communication, its sound and its performance. Conversely, more charm than is contained in it may be enjoyed by an animated gay listener as the latter hears what he wants to hear. 'What does this cloud look like' to me depends upon what I am. So is the case when we hear music; hence the disparity between music as produced and music as perceived. Listeners differ in their experience when they hear music because each of them has a personality unique and different from that of every other. Whatever it be, it is the sense of beauty in music which raises its listener to a plane higher than his usual one, a spiritual state which he alone may describe.

Creative and Educative

Music is essentially creative both for the one who gives and the one who listens because both the musician and the listener contribute something original and receive pleasure in the process. It gratifies their creative urge and harmonises their emotions, it emanates from their self-expression and thus tranquilizes them. The nature and extent of emotions that music may arouse depend upon intelligence and comprehension of both the musician and the listener. As in literature, science or other subjects, so in music, what will be attractive or repulsive to a person will inevitably depend upon the range of his comprehension. Not many can develop real interest for Einstein's theory of relativity. As the musician's vocation is to create the beautiful, he is always beauty-conscious and hence his meticulous care for things beautiful. Any agreeable feeling appeals to our souls; this is equally true of feeling caused by music and hence the need of improving musical performance. As in all arts, so in music, good expression, experiences and skills are required.

Children should be activated by music so that by listening to it they are initiated into physical or intellectual reaction. Class participation

of even the most aloofish child can be made through music. Creativity in music can be most profitably encouraged in the school. Let children write their own favourite story—may be from their reader or other books. Let them select a suitable motif for each character of the story. Help them to write down this motif. This will introduce them to the discussion of themes and motifs while studying the products of great musicians.

In this dull age of mechanical ways of living, children are sick of vocal drills and oft-repeated songs. Education must challenge their sense of creativity by providing music in the classroom. The space-conscious child of today hankers after the thrill of exploring, making or doing something new. Let him make his own song and let his class sing his song—this may satisfy his sense of achievement. While doing so, educators must not think that since all children cannot become musicians music for all would be a hot-goose chase. Music is more for elevating the soul, much less for a profession.

Psychology of Neurosis

Every person in this ultra-modern societal set-up finds himself face to face with difficulties which are hard to overcome, with ambitions which are hard to achieve, with attitudes which are hard to explain, with actions which are hard to rationalize. This in individuals causes conflicts, around which a neurosis grows. Distressed by their conflicts, they fling a question at themselves: 'Am I normal or neurotic?' Other facts apart, the truism – that a normal individual faces his conflicts and deals with them directly while a neurotic one feels handicapped by his conflicts – may be a very cogent answer to the question as to who is normal and who neurotic. That both normal and neurotic individuals are subject to conflicts in our culture is no longer open to question. Is it, then, something wrong in the individual, given a common culture, which makes him neurotic, or are there some inevitable factors in our culture which involve him in neurosis? What are such factors?

What Causes Neurosis?

The Freudian viewpoint centres round a not-too-valid theory that psychic or biological factors within an individual may cause neurosis or *social* phenomena. This may lead us to believe, for instance, that constant libidinal attachment to the parent of the same sex makes the child a neurotic adult, that war is motivated by the death instinct and invasion on others' land by the self-preservation instinct, that the trade system is based on anal-erotic urges, that lack of internationalism in the past was due to the narcissism of the past period and so on. The Freudian theory looks at a culture as if it was the end product of natural or biological urges which could be quelled or refined, with the result that reaction formations are built up against them; e.g., a thwarted or refined sex desire may, respectively, lead to neurosis or puritanism and poetry, the concomitants of a developing culture. This theory does not regard culture as the result

of a complicated cultural process. It emphasizes that the greater is the restraint on biological drives, the higher is the level of culture and civilisation. But this restraint or suppression leads to neurosis, if it is not accompanied by sublimation; and the capacity to sublimate being limited and varied, neurosis is an inevitable outcome of a growing civilization. In other words, neurosis is the price we pay for the growth of culture. This belief, in the ultimate analysis, implies that human nature is biologically determined, or more precisely that oral, genital and aggressive urges are equally found in all human beings, that the different individuals have different characters, just as they have different cultures, owing to the varying intensity of the suppression required to grow cultured and that the suppression affects the different kinds of urges in different degrees.

That the level of culture is in direct proportion to the suppression of urges – sexual, aggressive or others – is not supported by historical and anthropological facts. The maximum of restraint imposed on an urge like sex in a tribal culture made its people more sinful and stealthy rather than more cultured, while the minimum or no restraint on an urge like curiosity did not make people less civilised. The quantitative relationship between suppression and culture is, therefore, not the sole answer; the qualitative relationship also exists. Besides the quantitative factor, it is the quality of individual conflicts and that of cultural difficulties which explain the whole gamut of personality from normalcy to neurosis. What conflicts an individual has, how far he is adequate in meeting and resolving them, what kind of help or impediment, and how much of it, his culture offers in relation to the conflict – all these, and not one or some of these factors explain the genesis, kind or amount of neurosis.

Is Culture A Major Causative To Neurosis?

Certain characteristics in our culture reflect themselves as conflicts in a person's life. These conflicts, when piled up, may cause neurosis. Competition amongst individuals is one such characteristic upon which modern culture is economically based. An individual tends to compete with other individuals of the same group and attempts to push them aside. In this tussle the advantage of the one becomes generally the disadvantage of the other, resulting in a diffuse, unfriendly tension between individuals. In the same group everyone is the real or potential competitor of everyone else. This is often perceptible among persons in the same occupational group, though

these persons strive to keep up appearances – a subterfuge to look civilized or cultured – of being fair, polite or considerate. It must be taken for granted that competitiveness and the hostility accompanying it permeate all human relationships. Men compete with men in popularity, efficiency, dominance, recognition, while women compete with women in attractiveness, getting a partner or any other social value, thus ruining the chances of harmonious or happy social relationships. Competitiveness pervades school life no less. It is equally prevalent in the family situation, where the child is imbued with it from the very beginning. Freud saw it in the shape of rivalry between father and son, daughter and mother, old child and new child. He attributed it to biological conditioning; but it appears more sound to regard it as the response to culturally conditioned stimuli. Adler is perhaps right in implying that the rivalry is caused by the unfortunate comparison of the 'have-nots' with the 'haves', because social conditions do warrant such comparison. In fact, the cultural stimuli which breed competitiveness are playing their inevitable role from birth to death. The latent hostility and tension between individuals constantly generates fear – fear of hostility of others supplemented by a fear of revenge against one's own hostility. This builds up an edifice of neurosis.

The prospect or expectation of failure is another cause of fear. This fear is imminent and real, because generally the chances of failure, for some, are much greater than those of success, and because failures in a competitive society culminate in economic insecurity, deprivation of dignity and other emotional frustrations. Success is a bewitching apparition, because it brings self-esteem, because we evaluate ourselves according to the degree of our success, and not only because others evaluate us according to the same. A normal human being presupposes that success depends upon his individual merits, he compulsively feels that he amounts to something when successful and is a non-entity when he fails. Consequently, his self-esteem cannot withstand the shock of failure. This pre-supposition is, however, not convincing, because in actual fact success depends upon a number of factors beyond our control – accidental happenings, unprincipled actions and the like.

All these conditions together – competitiveness and its accompanying tensions between individuals, fears, loss of social prestige and of self-esteem – make the individual feel that he is quarantined. He may be happily married, properly placed in a

suitable vocation, he may have good children to boast of, and many social contacts. Yet he is emotionally isolated. It is very difficult to sustain emotional isolation. It is disastrous for anyone, especially when it corresponds in time and space with apprehensions and uncertainties about one's self.

In this unfortunate and unnerving situation, the normal individual stands in urgent need of love or affection as a remedy. The satisfaction of this need makes him feel less isolated, less frightened by hostility and less capricious of himself. But in our culture love is over-valued, it is regarded as an enchanting spectre supposed to solve all problems, it is taken for a strategem to satisfy even the wishes that have nothing to do with it; in short, we expect much more of it than it can possibly fulfil. But love itself is not a delusion as we seem to think. All the same, we lay ideological stress on love, probably to cover up the factors which create our heightened need for it, and hence the normal individual is in a conflict of requiring too much affection and the prospect of not being able to secure it. This situation makes the ground fertile for the growth of neurosis. The cultural factors which affect the normal person affect the neurotic all the more, making the latter destructive, intensely anxious, unduly competitive, self-condemning and needing excessive love.

Neurosis implies incompatible or contradictory tendencies that the neurotic finds it hard to reconcile. These contradictory tendencies are forestalled by certain contradictions in our culture. The typical neurotic conflicts are actual by these contradictions. One such contradiction is that between competition for success on the one hand and sympathy, self-effacement and humility on the other. We do everything to reach success – which requires us to assert and even be aggressive in order to push others out of our way. Pitched against this is the religious or moral ideal that we should be unselfish, humble and submissive, and that we should turn the other cheek when slapped on one. The one who takes both these drives seriously is inhibited in both directions and suffers neurosis, while the one who takes one of these seriously and discards the other saves himself from conflict, though he is bound to suffer the consequences which his choice of a particular drive may entail. Another contradiction is between the inevitable arousal of needs and the unavoidable frustrations in satisfying them. Economic reasons, advertisements, the desire to raise standards of living, hedonistic motives and the like stimulate our needs. But not all needs, at least for many, can be satisfied, and this results in constant frustration.

Still another contradiction is between the so called and much heralded freedom of the individual and all his factual handicaps in the way of enjoying the freedom. Society tells the individual that he is free, can decide his way of life as he chooses, and can get what he wishes if he is himself adequate and competent. In reality, for most, all these possibilities are amply restricted. The jocular saying that it is impossible to choose one's parents is no less valid in the case of choosing a partner, choosing a way of life, choosing and succeeding in a vocation and the like. Hence, the result that the individual is vacillating between a consciousness of unlimited powers and a feeling of utter helplessness.

These contradictions set firmly in our culture become the actual conflicts which a neurotic endeavours to settle, though he eventually intensifies them, so as to make no satisfactory solution, while a normal person is able to face them without damaging his personality. In other words, the individual who has come across the culturally determined hazards in an intensified form, mostly through the medium of his early experiences, and who either has not been able to solve them or has solved them at the expense of his personality, is likely to become neurotic.

An individual, a product of his childhood and adolescence and a victim of cultural hazards all through his past and the present years, must compromise his drives, demands, ideals to the limiting forces of reality, and be content with moderate achievement and restricted fulfilment, if he is to remain happy.

Psychology of Reading

"Reading maketh a full man", the proverbial saying of the first English Philosopher Francis Bacon, is evident of the importance of reading for man. Man in his struggle for perfection looks to his cultural and social inheritance, to thoughts and wisdom of past ages and to experiences of his own species – all recorded in the form of readable material. "The old order changeth, yielding place to new." Such change may seem alarming and posterity may seem to feel handicapped owing to the negacy of certain advantages of the old order. But in the long march of history man's spirit ever presses forward, seeking a better day and hankering after more and more of perfection. Great men come and go, after having expressed in language sufficiently vivid, beautiful or dramatic truths which they realized – truths about life and living, about God and Man. So did the prophets foretell and poets sing, and in order that man may enjoy or benefit from the finest fruits which the wisdom of ages can yield in the shape of ancient scriptures, prophetic writings, philosophy, drama and poetry, he has to read – "read not to contradict and confute; nor to believe and take for granted; nor to find talk and discourse; but to weigh and consider." Printed records from the four quarters of the world present harvest of good things, so many and varied inspired voices with words echoing down the ages like strong cries of encouragement – all wooing man's courtesy to read them. Reading is the most important tool of study and the chief educative agency. It plays a very important part in the citizenship, in the success of a vocation, and in the recreation of individuals. Its significance has further increased in modern times because of unprecedented advances in mechanization of life, highly improved concepts of space and time, interdependence of people all over the world, and the growing trend towards democracy, intensifying the need for every individual to form socially adequate attitudes and habits. This great increase in the values of reading warrants a peep

into its various aspects, namely reading as a means of communication, as a means to an end, as a form of experience, as the study of word-fact relations, as a psychological theory etc. This article, on account of limitations of space, is confined only to the psychological analysis of reading.

Psychologically, the process of reading is an unanalysable whole which cannot be understood by breaking it down into parts. We cannot have a landscape by collecting together grass, trees, sky, clouds, and other details. Landscape is a distinct percept or experience with a quality, all its own, in which the above-said parts exist in definite relationship to each other. Disturb the relationship and the quality of the whole changes. Thus a whole is always greater than the sum of its parts; it cannot be broken up and analysed without altering the nature of the experience. Similarly a reading process implies a total situation in which the person, his environment, and the reading material take part, and these parts exist in definite relationship to one another. The absence of any one of them or a deviation from their proper relationship to each other affects the reading process. If a person reads without having any interest or with an expectation of failure to comprehend, he spends less of energy which means that he does not put his mind into the reading, and consequently his performance is below par. Compelled by external agents or duty-bound, he may stick to reading; but lack of confidence in his work, fear of failure, faulty reading methods, the uninteresting nature of the reading materials, discomfort due to poor vision, distractions due to other interests—all these make him withdraw from the task mentally, if not physically. It is common knowledge that the soundness of mind is an essential pre-requisite for the success of a job, even if the soundness of the physiological organism is ensured and the reverse is equally true. This is more pertinently true in the case of reading than any other process, reading being a predominantly mental process.

In order to make reading comprehensible and utilitarian it is vitally imperative that all influences which affect the reader negatively must be neutralized. To do so, pictures, discussions or other experiences may be used to give a background of meaning in the object, the material to be read may be associated with some vital interest in his life; his attention should be diverted to points of interest he may not have noticed; how he should improve his comprehension may be suggested. All types of distracting stimuli like

meaningful noises may be eliminated and defects in vision corrected. Thus the entire reading experience may be modified to his advantage.

As a matter of fact, the problem and its solution are not so simple as has been indicated. The influences affecting the reader's performance may extend as far back as his early childhood experiences of failure, inadequacy, parent-child and sibling relationships. Conditions in home, the school and the neighbourhood such as lack of parents' affection, parental preference for a younger brother or sister, repressed curiosity, intensification of a sense of guilt and sex conflicts, may increase emotional instability and inner conflicts. Parents' and teachers' anxiety over the child's not learning to read may be transferred to the child himself and thus interfere with his effort to learn. Resistance to learning to read may be child's choice of expressing hostility to some person in his environment, or it be due to his lack of readiness for the reading experience. Sometimes the individual uses up so much energy in his inner struggles that he is unable to put forth the effort required for learning to read. Emotional needs of the individual in such a case have to be met to enable him to become free for attacking the reading problem. On the other hand, sometimes, in spite of unfavourable conditions, a proficiency in reading may be achieved because of some more dominant motivation in the reader's total personality. A student's reading ability cannot, therefore, be truly assessed without taking into consideration the complex forces that are influencing him at any one time.

The author's intention and the reader's determine to a great extent what the reader selects, interprets, infers or appreciates. A sensitive author tries to establish rapport with his readers and to them he may subtly convey his interest in communicating his point of view. He may be playful, sarcastic, or unemotional toward all aspects of a question. Or he may seem to write just for himself in which case the reader senses his aloofness. Sometimes, the reader finding the material unsuited to his interests or disposition feels that the author is talking to someone else and not to him. To be effective in reading the reader needs a mastery of the mechanics of word recognition, efficient methods of finding the meanings of unfamiliar words in a particular context, of getting the main ideas of paragraphs and the pattern of thought of the passage as a whole, of getting the literal meaning of specific statements and of drawing correct inferences.

In order to render reading effective, a few principles must be adhered to. Firstly, learning or reading must be individualized. This

is necessary because individual's condition – including his capacities, predispositions, present physical condition and the desires aroused by his immediate environment – intervenes between the teacher's instruction and the student's learning. Secondly, good reading methods must be repeated through many natural and planned activities that require reading. Mere repetition is not enough. Prayers rattled off when we were children may have gained true meaning for us only years later; the poems memorized verbatim for the sake of a perfect recitation in class were not meaningful because they were not our own. No one can learn something that he has never experienced, at least in part. If something is to be truly learned by a student, it must be used by him in a meaningful way and must bring satisfaction. This satisfaction may be immediate and closely associated with the activity itself, or it may be derived from the understanding that this activity, though unpleasant in itself, is important for the achievement of a much-desired goal. Thirdly, the ideas intervening between the stimuli to which the individual is exposed and the responses he makes influence reading. A recent research has shown that some of the best readers are more aware of the process they use than are the poor readers. When asked to tell their method of reading, the good readers said that they "skimmed rapidly to see what the author was trying to do," "looked for main ideas in the first or second sentence of the paragraphs," "tried to see whether anything the author said justified his conclusion," etc. On the other hand, the poor readers tended to be vague and general about their reading process.

Thus, details or slight clues are sufficient to give the rapid, experienced reader the thought of the passage as a whole. If a reader has a specific purpose, and if he goes after something in a passage and gets it, his reading activity is reinforced. If he aimlessly dawdles through a passage, getting nothing in particular from it, he has no reinforcement. Similarly printed word form may be associated with the object or action or with real or silent verbal explanations of its meaning. The success of these associations will of course depend upon the individual's readiness to respond, the amount of practice in reading and the degree of satisfaction that accompanies or follows his attempt to learn to read.

Thus reading is a psychological process in which the reader obtains meaning from printed words, and the meaning has to be determined in a particular context. His interpretation is based on his

memory of past experiences, reasoning and his purpose and attitude toward the reading situation as a whole. Effective reading is a natural outcome of the complex interaction between an individual and an environment in which reading materials, at a particular time, occupy the centre of his attention.

Psychology of Smoking

An eminent American author Aldous Huxley has said, "that humanity at large will even be able to dispense with artificial paradises seems very unlikely. Most men and women lead lives at worst so painful, at the best so monotonous, poor and limited that the urge to escape, the longing to transcend themselves if only for a few moments, is and has always been one of the appetites of the soul."

Although we may not share Huxleys' gloomy view of man's lot we must admit that tobacco, drugs, alcohol are important to many people in our culture. In times of turmoil and stress, cigarettes are often turned to as a means of alleviating anxiety and of coping with existential problems. But drugs including tobacco are two-edged swords and possibly enhance our experience, or they can literally wreck our lives. There always remains the danger that in turning to these drugs to escape from unpleasant reality, to resolve problems and to find euphoria, many will be entering a false paradise.

Cigarettes, which of all drugs and alcohol were once considered to be mild and safe, have more recently been found to be hazardous. People smoke cigarettes or chew tobacco to relieve frustration, anxiety, and tension and to provide some measure of enjoyment; in actual fact, however, it is nothing but a retreat from the stark realities of life, an excursion into the land of make-believe which gives us the false impression that our troubles are over and that we have reached heaven.

When the first Europeans set foot on the American continent, they met men and women with tobaccos, glowing coal in thier hands, kept burning by sweet smelling herbs. Since that time the smoking habit has conquered the world and finally split it into two camps — smokers and non-smokers.

For many a man or woman the sweet smelling herbs have begun to stink to heaven. The more smoke rose to the sky — in 1978 smokers

world-wide puffed away one trillion cigarettes – the more rousing the slogans of the non-smokers became.

“Suicide in slow motion,” “deadly epidemic” or “smoking or health-your-choice” such slogans have done their best to frighten the smokers away from the habit. Over the centuries, smokers have been under heavy fire for various reasons. As early as 1651 the German city of Ulm promulgated an order against smoking. Towards the end of the 19th Century smoking could be a cause for divorce – if the wife was the sinner – because smoking was a man’s domain.

During Nazi rule in Germany the slogan was “A German woman does not smoke.” A Japanese Health Ministry study found that “cigarette smoking does not stimulate thinking” despite public belief to the contrary.

The British Royal College of Physicians said that an average smoker was shortening his life expectancy by five and-a-half minutes with every cigarette he smokes.

Smoking may be learned by an individual as a way of demonstrating adult status or as a means of socializing with other smokers. Perhaps it comes to have value as a tension – reducer as well. After smoking has become habitual, the individual may enjoy smoking even when he is alone, that is when there is no need to use it as an aid to socialization – and may even want to smoke in situations that are ordinarily relaxing rather than tension-producing. The satisfaction of smoking a cigarette to reduce tension is such that the individual experiences a wild tension in order to have the pleasure of reducing it through smoking. Thus smoking is a habit that assumes functional autonomy.

Smoking develops symbolic value to the extent that it is more than a way of satisfying this or that need, and becomes a means of relating oneself to the culture at large.

Addictions to tobacco, alcohol and drugs develop in a bid to escape from conflicts but these substracts are first tried when the adolescent is asserting his independence, when his drive for autonomy, for freedom from parental control is involved.

Smoking is not always picked up with a drive for pleasant experience. Most people report that the first contact with tobacco is decidedly unpleasant. The individual persists if, and only if, his group considers it a sign of maturity to smoke. In the process of conforming to this adolescent stereo-type, however, he may find that

it has certain benefits – notably a bit of extra-energy at a time when fatigue or boredom is slowing him down. It produces a mild “lift”. Blood pressure goes up and the CNS shows evidence of arousal. Thus tobacco may come to have some positive value even though the first impact is negative. With time he may become psychologically dependent on cigarettes or cigars. Once he gets used to it, it serves as an escape device. It has the effect of dulling certain thought processes. Consequently, the person who has taken aboard a moderate amount of tobacco no longer remembers his troubles, or if he does remember them he finds them much less alarming than when he is sober and hence the temptation to resort to tobacco whenever the troubles alarm him. An extreme smoker may be a deeply disturbed person. His problem, however, is not tobacco; it is some more fundamental difficulty which caused him to resort to the pipe as a way of forgetting his troubles. It is that difficulty which needs to be tackled.

That tobacco leads to mind expansion – a feeling of broader understanding, marvellous insights into art, music, self, other persons and nature of reality – has been found to be utterly wrong. These insights are mere illusions and strictly phony. There are no recorded instances of unusual creativity in the artistic or musical spheres under the influence of tobacco.

There has been much research to find out how smoking affects efficiency. The experiments do not yield any conclusive proof that smoking affects efficiency. Smoking increases pulse rate a little and decreases steadiness (increases hand tremor). It makes no difference in simple tasks (speed in adding, reading aloud etc). It increases reaction time a little.

Researches have shown that students who smoke usually receive lower grades in College than non-smokers, and this difference in achievement has been attributed to the deleterious effects of tobacco. Contrariwise, it has been argued that smokers are by nature more sociable and more easygoing than non-smokers and that it is the personality traits of the smoker, not the effects of tobacco, which lead to poor scholarship. In fact, tobacco contains a substance known as nicotine which has certain toxic effects on the body. The nicotine contained in the ordinary cigar, if given hypodermically, would suffice to kill a man. But the nicotine in smoking tobacco is decomposed in burning, leaving pyridine – a substance only about one-twentieth as powerful as nicotine. It is pyridine which affects

the mucous membrane of the smoker's throat, nose and lungs and hence the effects of pyridine on mental and physical functions.

Researches have discovered that there is a causal link between cigarette smoking and cancer. Some medical authorities consider the net effect of smoking to be harmful. On the other hand, many highly competent people – scientists, writers, business executives – are convinced that their efficiency is increased by tobacco, that their thinking is speeded up and their imagination stimulated. Such opinions can hardly be regarded as experimental evidence. Mostly people use tobacco because they enjoy smoking, find comfort and relaxation in tobacco, are miserable (and hence inefficient) when deprived of it.

Some excitable like the vivacious find that smoking – not the tobacco itself, but the motions of smoking – helps to hide their nervousness. But this very nervousness in turn often makes them smoke excessively; under strain they may smoke incessantly.

Smokers fall into two categories, the lusty and the tense. The lusty smoker enjoys the so called good things of life such as excellent meals and pleasant company, whereas the tense smoker is characterised by inner tensions. The lusty smoker who prefers cigars and pipes to cigarettes smokes for sensual pleasure whereas the tense smoker smokes to alleviate tension. The latter can be distinguished from the lusty smoker by the quick nervous way he takes the cigarettes from the package, lights it and inhales the first-puff. He smokes half absent-mindedly, half ritualistically.

If the tense smoker wants to discard smoking habit, factors such as work or home difficulties that have created his tension usually must be removed or he must adjust himself so as to be comparatively free from tension. Getting to the cause of tension is ordinarily difficult but must be done if the tense smoker is to give up smoking. Because people do not realize the true causes of their tensions, their efforts to give up smoking are unsuccessful. However, in most cases fundamental causes of tension cannot be eliminated entirely, so that relaxation must be achieved through cultivation of substitute like a hobby or a new interest.

Studies show that tobacco smokers do not live as long as non-smokers. Smoking definitely impairs longevity. This impairment is greater for heavy smokers and less for moderate smokers. Tobacco also affects our moods and brings depression and passivity.

Whether you smoke for pleasure, for seeing the rings of smoke, to reduce mental tension, to cool your anger, to save yourself from worry, for stimulation to enjoy the pleasure of igniting the cigarette, to fill freshness in the mind, — all these are the psychological factors behind your smoking which in any case ruins your health.

Psychology of Spelling

That even the best at spelling know how to spell only a mere fraction of the total words in a language is not a figment of imagination. In the case of the English language the difficulty in spelling may, to some extent, be due to the non-phonetic character of its words.

Should we insist on standardized spelling when we are able to read old English writers in their varied spellings? Should the modern writers not spell as they like, so long as they get their thoughts across to their readers? There may be many reasons for an affirmative reply to the former question and a negative answer to the latter, but that our pupils would be saved much time and trouble is the worthiest and the most significant reason.

The importance of spelling probably arose only when the language became fixed in writing by the invention of printing. Dr. Samuel Johnson was the first to standardize English spelling when he produced his English dictionary in the year 1755.

Psychologically, spelling is a sensory-motor habit which is acquired by repeated motor reaction to certain sensory stimuli. It may be aroused by a sound stimulus, as when the teacher says — spell *wolverine*. In free composition it may arise by the memory of a word which fits a felt meaning. In writing a word, or in spelling it aloud, the conventional order of the letters must be known. To obtain this knowledge the letters must be seen or heard in a given order and the individual must write them in the order in which they are seen or heard. As in all habits, repeated practice is an essential pre-requisite to the formation of associations which lead to memorization. We spell at the ends of our fingers, as it were; the writing of one letter serving as a stimulus for the next letter in the word.

As it is not possible for pupils to learn to spell every word in the language, the need of selection of the words we should teach them to spell at different grades is paramount. The old plan that the

hardest words found in the dictionary should be taught is neither popular nor considered productive. Similarly the spelling vocabularies containing as many as 20,000 words or above are equally unwieldy. Research and experience of various investigators, notably W.N. Anderson, L.P. Ayres, Ethel Curtis and E. Horn, who attempted to work out spelling vocabularies, reveal that we should teach the words that will be most frequently needed in writing. The words chosen for the purposes should be such as are of a permanent value in writing done in school and in life outside the school. The list so compiled should then include the words which are also of permanent value in reading both in and out of school, which are most frequently used by children in speech, which are phonetic, and are easiest to spell. Just as this list may render obsolete all previous lists, the possibility of its being rendered obsolete by additional words of local value and the words popularized or necessitated by the changing times in the ever-changing world cannot be ruled out. The spelling vocabulary may also differ from place to place depending upon factors like literary, industrial and cultural influences.

A spelling vocabulary for the elementary school course may be determined by selecting 3,000 to 4,000 words and assigning them to grades. This is done by first finding the percentages of children in the various grades who spell each of the words correctly. A list of words from the easiest to the most difficult is thus compiled. The number of words to be taught in each grade can only be guessed at the present time. By averaging the opinions of a number of competent teachers, a more reliable division can, however, be obtained. The essential criterion is that the spelling of a word should be taught when the child needs to use it in reading and in writing.

The older belief that spelling was a method of memory is no longer accepted as valid. Memory has comparatively little to do with the knowledge of spelling. Business men who dictate all their letters to stenographers do not forget how to spell. The greatest single factor in learning to spell is maturity. Acquaintance with words and the practice that is necessary for correct spelling are achieved with age. The second important factor is the mental ability to perceive minute differences in words. Some people who do not possess this ability do not see that "Committee" has two m's, two t's, and two e's and hence experience difficulty in spelling it correctly. Another factor is intelligence, but correlation between intelligence and spelling ability is so low that a superior pupil will probably hardly score

better than a normal one in spelling correctly.

Formation of strong associations or bonds between different letters of a word is imperative for the learning of spelling, as the bonds will facilitate recall of letters which are temporarily forgotten. This would be done if the children write the words singly and in sentences, spell them aloud, and write and whisper them simultaneously. "Teach when the need arises" is a golden rule in the learning of spelling. This means that every teacher is necessarily a teacher of spelling. A high school teacher who teaches mathematics has failed in his duty if he does not teach his pupils to spell "hypotenuse" or "diagonal". As in all learning, so in spelling, frequency is an important element. Frequent reviews, monthly, weekly, and possibly daily, are therefore indispensable. Words spelt correctly cause satisfaction and those spelt wrongly cause annoyance. "Satisfaction effects learning, while annoyance retards it" holds true in the learning of spelling also. Praise is satisfying, blame is annoying; hence their universal use in the teaching process including the teaching of spellings. A very careful use of rewards and blames is, however, necessary. A spoilt child is the result of rewarding a wrong attitude. The teacher who uses school tasks, say writing correctly spelt words, as a punishment associates school work with punishment and annoyance. Another factor which helps is vividness which is obtained by stimulating the closest possible attention to the words and to the parts of the words that most frequently occasion difficulty. Thus in teaching pupils to spell "permanent" and "privilege", the "ma" and the "vi" should be emphasized. Use cements the bonds of nervous systems; disuse weakens them; hence the need of practice in learning of spellings. Incentives such as spelling bees and graphs of class and individual progress should be freely used as these motivate and encourage further attempts. The words to be taught in a lesson should be grouped according to a "common difficulty" principle. Synonyms should be taught when both words of the pair appear in the child's vocabulary. Meaning is another aid to learn spelling, as memory images of words whose meanings are known are constructed more quickly and permanently. Hence no word should be taught unless its meaning is known.

Class teachers will do well if (i) they write the new word in its normal form on the blackboard, pronouncing it distinctly; (ii) develop the meaning orally, either by calling on the pupil for a sentence using the word, or by giving, themselves, a sentence; (iii) they indicate the

syllables into which the word is divided; (iv) they allow the pupils a moment to look at the word again, then close the eyes and try to visualize it; (v) they make the pupils write the word several times spelling out the letters of the word every time, and see that they do not write just mechanically; (vi) they make pupils form the habit of looking closely at unfamiliar words; (vii) they do not call attention to the wrong form; (viii) they teach the pupils how to use the dictionary and require them to use it.

To test the pupils' spelling is equally important, to know the poor spellers. Besides, the words taught in each lesson should be tested to see if the pupils have learned them correctly. The errors may be slips of the pen in which case the pupil's attention should be drawn towards the word to make him correct its spelling. If the errors are due to ignorance, these should be corrected by reteaching the words.

In teaching spelling, many teachers set dictation in which a large number of children make mistakes. Tests in dictation must be given from time to time, but the teacher must know what the class is capable of. Spelling cannot be taught by dictation. The only function of dictation is that of a test of the correct learning of the spelling of words. "No dictation without previous preparation" is a sound, slogan. Dictation as an exercise, as a means of fixing spelling, should not involve mistakes. When it does, it leads to the further fixing of wrong associations between letters. Even though the right ones are known later, the early errors leave their traces; and the dull pupil may remain confused between the right and the wrong for a long time. The dictation which occurs often should be considered as a means of further fixing, by repetition, spellings already well known through the process of writing – which is the only process where correct spelling becomes necessary. The bad teacher might object that, if every boy gets all his dictation right, nothing has been accomplished. He should rather be happy that the spelling of these words has been more firmly fixed, and that without this exercise some pupils would in a few days forget the spelling with which they are tolerably familiar previously.

Spelling is related to reading in a complex way. Usually students tend to be good or poor in both reading and spelling and to improve or deteriorate in both abilities as they go through the high school grades. Thus improvement in spelling is a by-product or concomitant learning, resulting from reading and study of other subjects without special instruction in spelling.

The best method of teaching reading will lead to a considerable efficiency in spelling. The attempts of illiterate people to spell on phonetic lines lead to many mistakes. If we can get the pupils interested in literature, so that they read a great deal, we shall find that they gradually become familiar with the spelling of common words without needing a large amount of attention to spelling as such. It is, therefore, doubtful whether definite spelling lessons are of much value. At the same time, teacher's procedure, as above, to improve the pupils' spelling power is not ruled out. It is considered that the teacher should not worry about spelling during the early stages of reading, except insofar as it helps the process of reading. Spelling as such gives little assistance to reading. The attempt to attend thoroughly to both reading and spelling at the same time is unfavourable to rapid progress in reading. Spelling, if indulged in excessively, calls too much attention to the letters and hinders the beginner from paying sufficient attention to the whole word. Spelling should, therefore, be attempted seriously when there is direct need for it. We require to know how to spell only when we wish to write. "Form habits as they will be used" is a good rule. The children will acquire some facility in spelling in connection with their writing and transcription exercises. "Writing maketh an exact man."

Psychology of Superstition

People dislike thirteenth position or number, while choosing Derby tickets, prize bonds or even a house. Some are inclined to cancel their purposeful journeys or long-cherished outing, if a cat crosses their way. Some in the East regard Thursday as inauspicious for travel. Others believe that a certain day or a month is disastrous for marriage or honeymoon. These beliefs and many others of the kind are not unique, if considered from a psychological viewpoint. Their explanation and causation is in no way different from those of other kinds of beliefs like faith, the so called religious dogmas, and the like.

Social Background

Superstition may be useful from a sociological viewpoint, because it may ultimately throw some light on the mores, strengths, and weaknesses of a certain society or its want of modern resources, education and knowledge. Perhaps the primitive man's inability to see the real causal relationship, between cause and effect or phenomena, led to the formation of certain beliefs which the modern man, with all his knowledge and critical analysis, finds erroneous and hence names them as superstition. A crop planted in moonlight by a farmer might have yielded poor harvest and hence his neighbour's superstition that moonlight is a curse for sowing. The latter was not inclined to verify his seemingly invalid belief either because there were not many plantations around under different conditions or because his dependence on nature was deep-rooted. The modern man must have seen under his very nose, owing to his curiosity and the means for satisfying it, that a crop planted in day-time has an equal chance of extinction and that poor soil, faulty manure and a host of other reasons may ruin the crop. Man has conquered nature and has subordinated it in many respects. He is no longer afraid of the wrath of nature; his growing self-confidence and his capacity to

offset the well known accidental or chance happenings of day-to-day life have stripped off some of his superstitions.

In fact, fear has long been considered as an essential constituent of superstition. Individual or collective fear seems to have caused superstitions which are passed on to the subsequent generations as part of the cultural heritage. Many families which have had some tragic incident involving the death of an important member or loss of a big fortune in the years gone by were observed by the writer to be suffering from the fears connected with the tragedy. Fear is easily aroused in a state of continued illness, helplessness or darkness, and that leads to superstitions about the existence of ghosts, devils, or ill-fate. Chronic mental patients were found to be more clinging to such superstitious beliefs than out-door patients in a mental hospital. Maller and Lundeen also found that children suffering from frequent headaches, colds, and indigestion held more superstitions than those claiming better health.

Superstitions and their Origin

An account of superstition as distinct from religion and philosophy with which it is often confused by the laymen is found in the writings of ancient philosophers like Theophrastus and Francis Bacon. Later, a number of studies conducted by psychologists gave an evidence of the prevalence of superstitions in all people, young or old. Gould revealed that about 45 per cent of the normal school students of Scotland believed in superstitions. Conklin found that 53 per cent of the superstitious ideas presented to college students were admitted by them. Ter Keurst observed that many superstitions were accepted by high school students. In a local Indian school it was found that 40 per cent of the superstitious ideas were accepted and 14 per cent marked 'doubtful' by the average students when a list of superstitious ideas was presented to high school students. Likewise *Nixon* found that the adults equally believe in superstitions.

A study to locate the origin of superstitions undertaken by Maller and Lundeen revealed that home, friends, school, books and observation were the most frequently mentioned sources of acquiring and correcting common superstitions among high school students. Friends, home and personal observation ranked in the consecutive order of importance; while educational sources ranked last in the matter of acquiring superstitions, though they ranked somewhat high in that of correcting the same. This finding indicates that the

child's immediate environment is greatly responsible for fostering or correcting superstitions. Emme likewise found that parents are the strongest factor in determining or eliminating belief in superstitions.

Do they Persist?

Yet some of these beliefs show considerable constancy and tend to last very long. This is due to their development in response to cultural and functional factors, the social support behind them, the human tendency to withdraw from the stark and hard facts of life, to find a cushy refuge, and our formidable temptation to believe what is favourable to us.

Even memory sides with superstitious beliefs, simply because these are favourable to what we are predisposed to. A number of teachers who possessed "pro" and "contrary" views on "giving sex education to adolescents" were presented with reading material on the merits and demerits of the proposition. They were later tested for retention of the material. Those who were "pro" remembered the merits much better than those who were "against". Those who were "against" remembered the demerits much better than those who were "pro".

Do Age and Sex Make a Difference?

Caldwell and Lundeen found that college students are familiar with more superstitions than high school students, but the correlation on the whole between age and the number of superstitions among high school students was rather low. Garrett and Fisher observed that high school boys and girls are inclined to be more superstitious than adults. Wagner reported that belief in superstitions decreases while information concerning superstitions increases with age. Varying findings of this nature cannot be viewed without reference to environmental and cultural factors. Age by itself does not appear to be a determining factor of superstitiousness. This is confirmed by Caldwell, Lundeen, Gould and Maller who concluded that high school students of rural communities are more familiar with and influenced by superstitions than high school students from cities. This is very much true about Indian students and equally so about our adults. The writer found that a group of village men and women excelled a similar age-group of men and women in a cosmopolitan city in regard to their belief in superstition. Salt and Zapf proved that negro children believe more in superstitions than white children.

People belonging to backward and tribal classes in India have also been found to be more superstitious than those belonging to modern cities. Jones and Arrington support this finding by observing that race differences in superstitions are the result of environmental and cultural factors.

That women are more superstitious than men, college women more than college men, girls more than boys has been reported by experimental psychologists including Nixon and Valentine, Garrett and Fisher, Lundeen and Caldwell, and Zapf. Old women in Indian homes hold many more unfounded beliefs than their husbands. That girls cherish more misconceptions than boys in regard to matters of health, as revealed by Salt, may be partly due to the girl's inherent fear owing to being the weaker sex, or ignorance about the rules of health. Conklin's finding that superstitions regarding domestic and social affairs are more prevalent among women, while those relating to matters of sports and business activity are more prevalent among men may be due to the fact that the person's own fields of interest may arouse anxieties which take the shape of superstitions. That girls tend to hold on to their superstitions longer than do boys of the same educational level, as reported by Maller, Lundeen and Valentine, may be mostly owing to girls' lesser flexibility or to their fear-complex.

Can Education Eliminate Superstition?

Quite a few eminent investigators say, 'yes'. Caldwell and Lundeen claim to have eliminated 50 per cent of students' superstitious beliefs in a year's teaching of pre-planned educational units of science which were particularly meant to correct certain common superstitions. This is a creditable achievement; but it appears that the factors that have contributed to it are the general scientific atmosphere in the American institutions, the widely awakened students, the modern values, the exalted and flourishing level of the students' home and family background, besides the positive efforts of the experimenters.

Weller and Lichtenstein, again Smith and Frank, show evidence that science teaching effectively reduces superstitions. This is feasible because science develops objectivity, enables us to see causal relationships and makes us see phenomena in their true perspective. But whether this remedial programme will be equally effective or even possible in an un-American set-up is still to be seen.

Valentine and Herter, Gilliland, and Lehman and Fenton—one

after another – observed that on the college level a course in psychology reduces the number of unfounded psychological ideas. Psychology helps in facing the facts of life and develops objectivity in outlook but a predisposition favourable to dispense with superstitions has to play the major role. This pre-disposition may be a precursor to the above finding.

The observation of Zapf and Noll—that the mere teaching of science does not reduce superstition unless the instruction deals with it and is meant to reduce it—is quite appealing and is duly borne out by facts. Red Cross Blood Banks segregate white and negro blood in spite of the existing scientific evidence that blood shows no race differences. Racial prejudices in many States also exist in spite of this evidence. Similarly many scientific-minded individuals harbour unfounded beliefs which cannot normally be attributed to them.

Maller's opinion that the habit of rational thinking insulates one against irrational beliefs and superstitions is perhaps the one worthy of getting closest attention from the educators. His recommendation, that causes of maladjustment which encourage the development of superstitions should be removed, is also an evidence of his deep insight into the problem. Maller's opinion equally holds true in some other studies.

Critical and dominant seminarians were less superstitious than the submissive ones – "do-as-you-say" types – when the writer, while attending a seminar of lecturers, made a quantitative study of the superstitions they owned. Again mal-adjusted teacher-trainees were found to be more superstitious than those happy-go-lucky types who were well adjusted, when the writer made a similar study. Emotional instability and irrational association of ideas were found to correlate positively with superstitiousness in the study made by Maller and Lundeen and substantiated by Zapf.

Until man becomes 'know-all' in the real sense of the term and until he has a complete mastery of the universe, his belief in superstition of one kind or another might linger on. This, however, may not apply to rationalists. Superstition may be used as a stratagem, a subterfuge or a scapegoat by man exposed to several problems in this problemful world and hence his urge to accept it.

Psychology of Youth

"They are going to dogs," "these flaming youth," "this lost generation," "irresponsible," "heading for trouble," are the usual epithets used by elders through the years to express their concern over the follies of the youth who, in turn, refer to their elders as "old-fogies," "out-of-date," "old-fashioned," "interfering," "ever barking." This portrays the youth and, in a nut-shell, their psychology.

The boys openly hostile or unco-operative and sullen, the girls egging the boys to violent behaviour or complacent over the latter's pranks, angry grown-ups throwing stones at windows, breaking each glass pane with evident enjoyment are a few glimpses of the destructive behaviour that the youth often indulge in. The residents of the houses being stoned staying quietly behind the curtains, looking out nervously at the damage being caused, cursing the youth and their parents or teachers, bemoaning the alleged softness or weakness of authorities or administration — is a glimmer of the apparent helplessness of the adult community before the doings of the youth.

Estrangement and Defiance

The youth, who in fact are adolescents or in whom adolescence is lingering in spite of their entry into young adulthood, consider us, their parents and teachers, as just a general symbol of the adult. They seem suddenly to have deprived us of all personal relationship with them. They, to our painfulness, consider us simply "those old hogs," the power group from whose grip they must endeavour to emancipate themselves.

We adults too do the same thing to our children when they enter adolescence, though we do not become conscious of it. In this period father reacts to his son not so much as a person or a parent, but as though he (father) is an adult, a wise and powerful guardian of virtues and goodness on earth, a know-all, or a reformer pitched

against the youth which is getting out of hand. Father's little boy or girl suddenly becomes not his son or daughter whom he knows and loves so well, but just an example of the modern lads and lasses who go astray if you do not keep them in line or if they have no fear of the elders.

The youth becomes defiant and the parent-child relationship suffers estrangement as a consequence of this peculiar phenomenon which, natural and harmless within limits, often becomes a real hindrance to wise handling of the youth. It leads to avoidable antagonism between the two generations. We feel threatened by what the youngsters do or even think and feel, and as a result we form a mental stereotype about it. Many situations, otherwise ordinary and normal, grow into sham battles over a cause or principle, when the immediate problem could have been easily solved if the two adversaries had remained what they were to begin with: two persons, the parent and the son or daughter settling scores.

Confused Public Opinion

The adult world tends to be hostile to youth in striking contrast to the fact that we all like children especially our own. This happens when we suddenly switch from personal involvement with a child, even our own, to a collective view of the youth problem. This shift in focus occurs when a youngster becomes involved in an atrocious crime, even though the seemingly ghastly act may have been the so obvious outcome of several preceding events that the crime should not logically be regarded as typical youth behaviour.

When a teenager trying to defend his mother against the onslaughts of his sadistic father hits him a little too hard, we – our newspapers – call it a teenage crime, implying that this boy is typical of the youth of our time or that the so called crime has been caused by the characteristic, so far not delineated, essentially associated with or found in a teenager, though the unfortunate event so obviously stemmed from the pathology of the adults in the boy's life. On the other hand, a teenager rescuing a girl from ruffians is by our newspapers called a hero, implying that the boy is not a representative of his age, but just a hero by himself alone and perhaps became so by fluke. In other words, the youth are regarded as a breed suspect until proven innocent. Their bad acts reflect the whole age group, while their good deeds do not do so and remain the exceptions that prove the rule. It is this sort of stereotyping in public attitudes that

needs to be attended to. Our suspicion of and negativism towards the youth backfires by engendering conscious or unconscious counter-aggression and distrust from the latter. This causes inter-group tensions between the grown ups and the youth. The society has paid in the past so high a price for collective prejudices and suspicions in the areas of race, religion, class and caste that we should know something about the group psychological pathology and its serious effects.

Group Behaviour

Our disenchantment with youth occurs when the young people gather in groups. Their boisterous, loud and rather inconsiderate behaviour gets on our nerves and re-inforces our suspicious stereotypes, though that unseemly behaviour is often more typical of the group situation individuals are in than of the individuals themselves. It was once observed that even adults, otherwise dignified and mature, played *bavoc* with the toilet articles, beds, plates and foodstuffs when placed in a group situation like that of attending a marriage party in a town not their own. What happens to the human individual, age not withstanding, under the impact of group psychological excitement, is still to be discovered. An ingenious research on the problem of group pathology might make it possible to predict which person's self-control and value system will succumb to a certain amount of group psychological heat and how to help individuals keep their sense and control intact under free floating contagion. For the present, therefore, we need not allow ourselves to be irritated at an age-range which the youth occupies.

Need for Understanding

We want the youth to develop the character trait of integrity and consistence – courage to stick to what they believe in, even against strong-armed pressure and the fear of becoming unpopular with the group. This trait like any other must grow through a range of developmental phases. It needs leeway to be learned and practised. While being practised it often looks anything but desirable and can be very annoying to the adult who has to live with it – a boy or girl insisting on going to the pictures without being chaperoned by father or mother, or a youngster out to satisfy his love for an ideal in preference to his love for the family. Strong emancipation efforts of the young adolescent are normal phases of his development which,

though uncomfortable for educator and parent, are important as preparation for independence. The defiance, bold insolence and resistance to authority, which accompany such efforts, are a part of this developmental process. They do not become habits; rather they tone down by themselves as soon as the trait of integrity, for the sake of which they were manifested, is sufficiently developed.

The extent or intensity of youth problems or upsets is directly proportional to the attitudes taken towards a youngster by the adults around. It is this attitude which makes his passage to adulthood smooth or difficult. The parent or teachers may suppress his urges towards more independence. They may constantly ride roughshod over his aspirations, or habitually disapprove his opinions, his notions and his seemingly absurd ideas or actions, thus making him react in a negative manner and defy their authority. On the other hand, the parents or teachers, through their attitude, may help the youth outgrow his difficulties. To accomplish this, they need to be tolerant, to accept things which appear foolish, stupid, unwanted or even undesirable. His preoccupation with dress or personal adornment, his friendship and play with members of the opposite sex, his negative reaction to certain foods, things or ideas are the things they should approve, pretend to approve, or at least be indifferent to, instead of reacting to them with a violent outburst. They should be satisfied to think that such absurdities are a temporary phase which the youth will soon outgrow. He will leave behind adolescent behaviour just as he left behind a childish appearance in favour of an appearance of a mature individual. Thus youth brings with it greater possibilities of mental ill-health than other ages, but it has also greater potentialities of adjustment than most, because the youth is responsive and can be easily moulded if properly understood.

Need to Cultivate Integrity

A youngster today tends to follow the mob willy-nilly. Why does he do it? In fact we have little information on how to help him keep his integrity when confronted with gang and mob pressure. One very great problem of the nation at this time is to discover how to help our young people stick to what they believe in, even in defiance of whatever opinion or action might be popular at the moment with the rest of the youthful group. Actually a lot of behaviour usually termed "rebellion" or "defiance" may be the opposite. The college boy who participates in an incident of vandalism because he is afraid of being

called coward, timid or girlish is not a defiant boy, but a coward, a conformist, a spineless fellow, a fawny subordinate. The real problem at hand is therefore submission rather than defiance.

Thus, in order to understand the youth we have to interpret his behaviour. We have to know the causes behind the manifested behaviour. We have to look below the surface before we can know what the problems in any specific defiant act are. Instead of regarding this act as delinquency, we should take it as an educational challenge with an eye on remedial action.

Need for Wise Adult Reaction

Normal college boys bored beyond limit by stupid restrictions imposed by parents may become hard to handle. Normal college girls annoyed beyond limit by poor diet arrangements may show frightening and disgusting outbursts of youthful defiance. This defiance is not the outcropping of a corrupt or morbid personality, but the defiance by a healthy one against the kind of treatment that is often meted out to the youth. When youngsters with deep-rooted anxieties are brutally handled, their frantic muscle spasms and aggressive mauling of environments are just the expressions of their inward terror.

Thus reactive protests and provoked agitations call for consideration not only of what is wrong with the youth but also of what is wrong with what we are doing to him. In fact we have yet to develop and apply greater knowledge about the most advantageous setting for growing youngsters and for helping adults use a lot of wisdom in their reaction to youth behaviour.

Tribulations of Youth

Adolescence flows in the veins of the youth, both adolescents and the young adult, who, though chronologically men and women, have not yet become adults or mature. It is a time of stress and strain, a difficult period during which the individual is neither a child nor yet an adult. At the same time it is the most important phase in a person's life because further differentiation and integration of personality take place in this period. If we believe, as we used to, that adolescence is caused by rapid growth with resultant awkwardness and uncertainty and by the realization of sexual maturation, there is precious little that can be done beyond being tolerant and sympathetic. This view stresses that the difficulties of adolescence are natural and

inevitable. But the contemporary view that adolescence is caused by the pressures of modern civilization is more appealing. This view inspires hope and optimism. It stresses that the needs, which the modern civilization creates, must be met constructively, in order to foster maturity in the youth.

The youth is said to be in a "no man's land" of society. There is no occasion when his work is needed or appreciated. The period of youth is lengthy because our society has chosen to make it so. The growing youth is kept in school or college until he is eighteen or even longer. He can't marry until he is in his twenties because of legal restrictions and public opinion. He is refused adult work or wages comparable to adults. His parents, in their anxiety for his welfare, and out of habit too, keep him under their strict authority until he comes of age and what that age is nobody knows – in India that age comes when he is married off and employed, nay when he has set up his own home. He must necessarily remain dependent when he wants to do, and is capable of doing, constructive work. Instead of being an economic asset to the family as the youth was a few generations ago, now he is a financial liability, even in his twenties. Again, in our society adolescence has become more difficult for the youth because adults do not want to give him the independence he craves. Thus it is his unique place in society which constitutes the problem.

Adjustments for the young adult, who too comes in the age range of youth, are usually related to planning a career which can cause stress. Living with stress involves both physiological and psychological factors. Tension increases with responsibility, but many people thrive on it, while others wilt under less tension. Hereditary background, general physical health, are important here, but learning to react to stress situations in a positive way is most essential. Early development and training may pave the way towards healthy adjustment.

The young adult has to make his own way in the world; he can dilate and linger in the protection of his own home or in the corridors of his *alma mater* where the storms of the world are filtered and refined, but he can't tarry too long without commitment and the direction it provides. The choice of an occupation and that of a mate are the decisions that start him on his way. Those decisions result from the total developmental process together with the realistic opportunities available at the critical time of life.

Shifting moral standards and an alteration of ideals attendant

upon fast hurrying world, seething with new economic and social values have left many a youth without firm convictions. Consequently the youth is too confused to find firm anchors for his ideals.

Youth Services

The changes in cultural organization can be turned to the advantage of adolescents. The prolonging of education can be a great advantage if educational opportunities and expectations are geared to natural growth process, to the existing cultural conditions, and to the unique needs of adolescents. Teachers and parents should treat the youth as adults, help them in adjusting to other students and to teacher community, assist them in formulating personal objectives, make them establish feelings of worth, help them in understanding themselves and make them think about their future adult roles such as finding a vocation and establishing their own homes. Teacher can do all this by studying the nature and meaning of the youth's behaviour. The youth they are dealing with may not fall in any textbook category. In fact parents and teachers who deal with adolescents should not allow any theory of adolescence to blur their vision of the particular youth with whom they are dealing.

Adolescents reflect the society to which they belong. As society changes, adolescent behaviour also changes. For instance, new problems of affluence, easy ownership of transport like motor cars and scooters, early maturing, the advent of mass media like radio and television, and the availability of jobs in nearby towns make the vast majority of ruralites town-oriented in their thinking and behaviour.

Youth clubs, libraries, special interest clubs and several other flexible forms of catering will go a long way towards making the youth mature men and women. Any youth service, however, should review its objectives, know the differing needs of the new generation of adolescents and provide programmes and activities aimed at producing mentally healthy adults who can play an effective role in society.

The youth welfare organizations and youth leadership directorates in universities and government must take into cognizance changed social and economic conditions that have resulted in profound changes in the organization and activities of the community. The increased leisure time of boys and girls has presented a definite challenge to the communities to provide recreational opportunities

and better guidance to boys and girls, especially during the period of adolescence.

A collection of boys, girls and adults, as in the camps held by national social service and youth leadership organizations, does not make a community. There must be common interests and needs, mutual confidence and understanding, association and sharing a common lot, if there is to be a community. There is no need for pessimism in this behalf as here and there one does find an enlightened college principal or an accomplished individual capable of creating such a community and turning the hitherto formal youth agencies into concrete and practical youth services.

True community means that many activities are shared by the same people. The unified living results in deeper, social roots and more integrated personalities. The so called summer camps may be used to provide for the recreational health and educational needs of youth. The time in the camps should not be wasted but used as a road to health, efficiency and morality. Without a goal, free time may bring the youth in contact with vice, crime, and unconventional practices. But if the programme offers libraries, museums, sports, hobby groups, playgrounds, movies and parks, there is less chance that they will divert their energies into undesirable channels.

Another very important need of the youth is vocational training which is based upon a recognition of the value of the individual as a member of the social group. This training is a resultant of technological development, economic changes, and social forces. Within the social group is variety, caused by the specialization of labour, and this calls for vocational guidance and training to the end that each individual may be successful and adjusted in his place in the world of work. And this vocational training, from a broader viewpoint, may include character and personality development as also training in citizenship.

The development of youth with the interests, ideals, attitudes and values essential for happy and harmonious living in a democratic society will require more than platitudes, more than textbook assignments, more than political or religious creeds, and above all more than providing lip-service, or just formal lay-outs of youth service programmes, made for a show-off or for the fact that these have been thrust from the higher echelons or for the purpose of winning kudos – all of which start with a bang and end in a whimper. A firm conviction in the theory and practice of youth service programme

and a will to work on the part of those who provide youth services is the most important pre-requisite.

We are in an age when society, largely as a result of technology, fails to provide a place for the youth, except in a very artificial manner in the form of sports and other college events. The education of boys and girls demands that consideration be given to such problems as have resulted from the effects of science and invention, and that training for world citizenship be one of its goals.

If democracy is to serve and function effectively for the well-being of all, education must accept its challenge, and provide students with the information, skills and attitudes that will equip them to meet the problems of tomorrow. Youth must be trained to pass sound judgement on national and international issues and policies, and they must be equipped with values consistent with a philosophy of world brotherhood, as also a consistent philosophy of their own life. This suggestion may cause consternation to many who think, and perhaps genuinely, that the youth are too immature and too unripe to be associated with matters of policy and the state. But the writer contemplates that such association may be really fruitful with such youth as may be creative, highly enthusiastic and oriented towards patriotic tasks especially when they have been educated and imparted some training for becoming a responsible, enlightened, mature, mentally healthy and democratic citizenry through effective processes of education and comprehensive youth service programmes.

Role of Parents and Teachers

The responsibility of parents, teachers and other adults in regard to youth problems is, now-a-days, not lighter but heavier than in previous years when inescapable distresses, and biologically-determined turmoils were believed to be an inevitable characteristic of a certain stage of growth. Human beings are individual as well as social. They differ in potentialities, but the capacities of all can be realized to a degree which was formerly unknown. The task of the educator, though hard, is fascinating. It is that of diagnosing and treating the special difficulties of those adolescents who by misdemeanours of various types signify that they are in distress – the youth with personal problems which cry aloud for solution.

The requirements of youth in the home are the security that follows from the consciousness of family affection, an atmosphere of courtesy and consideration, a certain measure of responsibility for

some part of the common welfare, emotionally mature parents, interesting things happening in the home and an appreciation of the youth's offers of cooperation. The needs of youth in the school and college are meaningful activities in which willing participation of pupils is encouraged, emotionally and socially mature teachers, an acceptance and recognition by an admired group, opportunities for adventures in learning and a chance to make deliberate contribution to the corporate life of the school or college. Again, if the community provides for attractive enterprises, opens windows upon the heritage of religion, philosophy, art, music and literature, creates an atmosphere of friendliness and kindness, and gives opportunities for recognition and responsibility, the stage is certainly set in which adolescents may mature to healthy adult living.

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Inferiority Complex: Its Psychology

Adler in "A study of organ inferiority" illustrates how nature makes up for certain physical defects in an organ of the body by increased activity or by changes in structure which enable that damaged or inferior organ to do more than carry on its usual work. This compensatory mechanism is apparent when callous bone is formed at the site of a fracture, the new bone serving as an additional supporting framework, or when scale tissue filling in the defect caused by a skin-cut or muscle-cut is formed, or when certain sense organs like the eyes or ears become more sharp. All these raise the efficiency of the injured individual.

Thus nature plays a very helpful role in keeping an organism at a high level of efficiency by nullifying any existing inferiority. In fact, the total organism, not single organs alone, reacts in a compensatory manner to the existence of a defect. This reaction is often seen when the personality of an individual is found to be the direct outcome of the existence of some defect or inferiority in him. Thus we find individuals, who have suffered from defects, often minor ones, of the eyes or ears, becoming highly 'motor' characters in life whose entire lives seem to be directed toward translating the world about them into visual or auditory values to aid them in their efforts. An inferiority complex, by and large, is therefore by no means incapacitating. It may however influence the way the building up of one's personality takes.

A Universal Sense

That the modern man who, as compared to the primitive man, understands much more of the physical world in which we live shows inability to master the fickle elements or to solve the problems of death, disease, and decay of our bodies is enough to prove the

universality of the inferiority feeling. We are still helpless before lightning, floods, earthquakes and the like. But for a little bigger brain man might have gone the way of the lizard, facing the hard realities of life with innumerable feelings of inadequacy.

Even biological data demonstrate the existence of a universal sense of inferiority in all human beings. Animals have a shorter period of helplessness than that of human beings. When cats are old enough to know what a rat is, they are simultaneously capable of stalking it, catching it, and eating it. A young calf can distinguish poisonous from edible grasses and can eat the latter at the same time. But a human baby can recognise its bottle long before it is old enough to reach for it and feed itself. Long before it can walk, it can understand that its parents walk with comparative ease. This inadequacy is due to the fact that the growth of mental faculties and motor apparatus does not proceed in a parallel curve in the case of man, though it does so in the case of all other animals.

Civilization and culture tend to prolong and thus intensify the human being's sense of inferiority in that he has to pass through infancy, childhood, adolescence and early adulthood before he can begin life as an independent member of society. Man compensates for the sense of inferiority imbedded in the human race as such; he also compensates for his individual inadequacy. Thus he makes important and double compensations which not only set aside his 'minus' but add lavishly to double-plus the level of his efficiency.

Social Adjustments

Man's most characteristic way of solving the problems of existence is the formation of social groups, as society is his main defence against the inexorable forces of nature. An isolated individual is in a miserable state, which signifies a formidable sense of personal inadequacy, because the protection of his group is not available to him. To make oneself socially adjusted is thus an important prerequisite to happiness. The means available to us for social adjustment are as varied and complex as the needs of human life itself. Speech, common-sense, love, friendship, pity, even music, painting, writing, drama, religion, laws, science, clothes – in fact all those techniques which involve persons other than one's own self are at one's disposal for purposes of social adjustment. The more means we adopt and utilize, the more secure and humanly happy we are. That social life is our most vital need is a truth in human living.

Even biological instincts and primitive urges like hunger and sex, common to all human beings, are subordinated and socialized by this need for social life. Marriage is the socialization of the sex urge, dining that of the urge to keep alive. This social need also demands of every individual a contribution towards the maintenance of the group. Hence work in some form or other is obligatory to every man, or is necessary for social survival as also for individual survival. Marriage is similarly the most satisfactory solution of the problem of the bi-sexuality of man, because it assumes natural responsibilities towards the state and towards the children by the two parties. The married individual has the sense of security and happiness, which the unmarried individual, with rare exceptions, falls short of.

There is no denying the fact that the origin of society lay in primitive man's fear of isolation; that is why every modern individual, isolated from his fellows, shows the identical fear which is the unavoidable accompaniment of the inferiority complex. The individual as well as the race must get rid of the inferiority complex by social adjustment, which alone provides security and a sense of personal adequacy.

New ways of living essentially involve social adjustment. We must adopt these ways to shed the inferiority complex, whatever its origin. Most individuals suffer from an inferiority complex, because they have not learned the technique of adjusting themselves socially; they have found it easier to win security and happiness by building walls around themselves than by building approach roads to their fellow-men, little realizing that the inferiority complex is best and most easily cured and happiness is best achieved by making allies rather than by getting encircled in stony or powerful defences. The more walls they build, the more anxious they become, and the more anxious they are, the higher they build these walls. This is how the vicious circle of isolation goes on and on.

Identifying the Complex

The individual ridden by the inferiority complex is essentially an isolated individual – isolated from his fellow-men in one way or another, for one reason or other. This isolation has already made him anxiety-ridden, unhappy and insecure.

Any situation in life which threatens to intensify this isolation tends to present to him a major danger, thus revealing his inferiority complex. Sleep is one phenomenon in which isolation is desirable

and perhaps necessary for enabling the body to recuperate its powers.

To the individual suffering from an inferiority complex, sleep tends to intensify his isolation to pathological proportions and thus to multiply his anxiety manifold, resulting in insomnia. Nervousness, fear and worry in situations involving no real danger are some other expressions of one who, on account of his unconscious sense of inferiority, has isolated himself.

The inferiority complex finds its clear manifestation and expression in the egoist who, though grown to maturity, manifests the cult of personal superiority, expressed in an overweening ambition for riches, knowledge and prestige, together with a feeling of being unmatched or unparalleled and a feeling of individuality ranging from personal oddity in dress or behaviour to the doctrine of personal saintliness.

Depression, apathy, disinterest in work, jealousy, chronic hesitation, indecision, inconsiderateness, snobbishness, arrogance, the will-to-be-first, and suspicion are other identifying marks of the inferiority complex isolated in individuals whose intolerable isolation has made them misanthropic. Such individuals, owing to lack of social adjustment, fail to acquire social responsibility; hence their tendency to shift the responsibility to others, or to conditions beyond their domain.

To those, who understand human nature, the 'buts' and 'ifs' of such individuals clearly demonstrate an underlying inclination to evade the problems of life and to shift the responsibility to phenomena which are seemingly beyond their power or to contrive excuses for disowning their own faults.

Physical symptoms like indigestion, asthma, vomiting, grimaces or even fear of diseases like cancer and tuberculosis, and psychological symptoms like feigning ailments or seeking undue attention may be other indications of the inferiority complex in adults who, through their symptoms, are attempting to attain some psychological purposes. These purposes in most cases centre round a bid to remove themselves effectively from the stark realities of life.

The puritan as well as the prude manifests the inferiority complex as does the critical male or the romantic woman who makes wanton search for an ideal mate. Their underlying fear of sexual adjustment undergoes a thin veneer of rationalization, through exaggerating the

importance of sex, fictive organic disability, regarding sex as a curse or sin, or leading a life of pseudo-saints in sex affairs, and through making sex a game in which they strive for supremacy over the other sex.

A neurotic has a cowardly attitude towards the problems of life. This attitude is an index of the existence of the inferiority complex. 'I would win if.....', 'I shall marry, but for ...,' 'I would succeed but I cannot,', 'I will make friends provided....', are the slogans of the neurotic's life.

Removing the Complex

One might say that, since the inferiority complex is a part of one's nature, the chances of its removal are scanty; that since human nature cannot be changed it may not be possible to cure the neurotic, the pervert, the nervous, the timid; that since men as a race suffer from an inferiority feeling, not much can be done to controvert this feeling. This pessimism and feeling of helplessness again is none other than a clear exhibition of the inferiority complex. There is not the slightest doubt in saying that the inferiority complex can be cured, is cured and must be dispensed with.

In fact, the causes discussed above are a pointer towards the cure of this unfortunate complex. With civilization growing towards a summit, mankind through the ages has demonstrated that the inferiority complex can be removed, provided we stand in a positive relationship to our fellow-beings and, besides developing our own self-image, understand the mistakes, experiences and sophisms of our companions. Examine your inferiority complex rationally, look at it with your eyes open, and you would surely know what you can do about it and realise that you can do everything to rise above it. Constructive optimism and a sense of practical functioning rather than the world of brooding and despair will make all the difference. Happiness is attainable; why not go in for it?

By sheer effort and determination, you can convert inferiorities into assets. Bounce back from failures with a will to try again, and you are bound to succeed. You can develop all talents and gifts which you think your neighbour possesses in a greater degree. Developing your potentialities and increasing your social usefulness would be most useful. Some of your associates may inject in you a belief that money or power alone will bring happiness, or that the lack of money causes the inferiority complex. Do not get entangled in such inscrutable beliefs.

It is by contriving for yourself a better way of living and self-education that you can get over your inferiority complex. Beware of the green-eyed monster of jealousy and negativistic attitudes towards your associates who are seemingly installed in better circumstances. You are in no way less fortunate. You have just to act to develop what is called the fine art of living.

V

TEACHING AND TEACHER

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Teaching: A Myth

Not many educationists or philosophers have answered the questions "what is teaching" or what is the nature of teaching? The use of such terms as maxims of teaching or techniques of teaching has, in fact, left this question all the more baffling.

Nature of Teaching

Most of the methods of teaching such as the discovery method, the play-way method, the structural method, and the direct method point towards the activities of pupils and not of teachers. What does the teacher do or what is teaching or what it involves is not at all revealed when we discuss a teaching method? Similarly, activities like preaching, indoctrinating, advertising, communicating, machine-teaching and the like tend to confound the meaning and significance of teaching. Again, when we watch a teacher teaching, each of us has a different judgement of his teaching effectiveness, obviously because we do not have a clear or all-agreed concept of teaching. Lastly, what the teacher does in the classroom very much depends upon how he understands teaching. A crazy teacher may do crazy things in its name. To know about the nature of teaching is perhaps most important for a teacher and certainly so for the teacher of teachers.

It is, therefore, necessary to characterize the activity of teaching as distinct from all other activities including those that a teacher does as part fulfilment of his duties or even in conjunction to the teaching activity. As the teacher enters a classroom, he does so many things such as opening the window to let in more air, sharpening a pencil, wiping the blackboard, opening a register, marking attendance,

preventing a squabble between two pupils, and the like. But none of these activities can strictly be called teaching, though they do form legitimate parts of the enterprise of teaching as a whole. For this enterprise to be that of teaching, it is necessary that it must contain specific teaching activities.

Teaching is not a kind of specific activity that is readily identifiable like, say, reading or walking or riding a horse, and hence the difficulty in recognizing it. A number of specific activities, however, may be termed as teaching. Describing a geographical situation, drawing a map on the blackboard and saying nothing at all, demonstrating an apparatus to pupils, telling a story to children or proving something may form part of the so called teaching activities but many, if not all, of these specific activities which occur within teaching, also occur when one is not teaching. Also, none of these activities implies that teaching is taking place at all. Thus, spinning out a list of activities of this kind does not reveal what teaching is.

Polymorphous Activity

Teaching is, in fact, a polymorphous activity. It takes so many different forms that there seems no limit to the activities it can involve. Standing on one's head, driving, riding, solving a problem, or any other activity might occur as a teaching activity. Which activities might be involved in any particular instance will of course depend on what is being taught. Yet it is true that teaching, say, to drive involves more than merely driving, *i.e.*, to demonstrate driving. Similarly, teaching to solve a problem includes telling, proving, etc. In other words, to subsume any activity under the notion of teaching, it is necessary that the activity must be carried out in some special way. Nevertheless, demonstrating and proving may form only a limited range of activities that teaching a thing involves. There is perhaps an exhaustive list of distinct activities into which the concept of teaching could be analysed. Again, activities like demonstrating, proving, and telling may be involved in teaching but may also be involved in entertaining. So teaching must be characterized in a way that makes it clear when these activities are indeed involved in teaching and when involved in, say, entertaining. Such characterization of teaching will also illustrate why these activities are particularly important in teaching.

Any activity is characterized by its intention or purpose, but many intentions cannot be ascribed unless certain observable

conditions hold. Secondly, for a given set of observable conditions a number of diverse intentions may be ascribable. Thus, in the case of teaching, we must know what is the intention by which its activities are picked out from all others and, secondly, what necessary observable features are there by which we can judge that some activities could not possibly be teaching, whereas others might well be, though we can never be certain from such external characterization alone. The intention of all teaching activities is that of bringing about learning. That is why the concept of teaching is in fact unintelligible without the grasp of the concept of learning. There is no such thing as teaching without the intention to bring about learning. Thus, one cannot characterize teaching without characterizing learning. Until, therefore, we know what learning is, it is not possible to know what teaching is. If one is not going into the classroom to bring about learning, if that is not the intention, then one cannot be said to be teaching. Of course, pupils may learn many things when a teacher in the classroom is not in fact teaching; but that is another matter. The teacher in the classroom may be doing many things which are of value; but so long as he is not carrying out the intention – the intention of bringing about learning – whatever else he is doing cannot be termed as teaching.

So long as teaching involves full intention on the part of the teacher to get pupils to learn, even if the pupils learn nothing, the activity in the classroom may be called teaching. The assumption, rather fair certainty, is that learning will occur. In fact, real teaching does cause learning, to some degree at least.

Though teaching cannot be characterized without characterizing learning, shall we call all learning activities learning or a product of teaching? One may learn things by trial and error, by conditioning, by discovery, by being told, and by many other means. As in the case of teaching, every activity that is undertaken with the intention of learning will be called learning. The aim or end of learning is always some specific achievement or end state, *i.e.*, knowing something one did not know before, being able to do something one could not do before, developing an attitude one did not have before, and so on. As a result of learning, one may know a new theory, know how to swim, know how to compute a mean, know that Tony had three wives, know how to appreciate classical music, or maintain discipline. Thus, like teaching, learning too is a polymorphous activity. Thus, if learning is the activity of a person, the intention of which is to learn

a skill, the person in all probability does learn the skill. Nevertheless, the end states of learning are varied and diverse.

Sometimes learning may not result in knowledge or that whatever we learn may not be necessarily a truth or fact of some kind. Again, just as teaching covers cases where the teacher has no intention of bringing about learning which nevertheless takes place, there is learning where the pupil does not in fact intend achieving the appropriate end which he nevertheless achieves. Such non-intentional learning is caused, not by intention, but by such causal processes as hypnotism, conditioning, or sleep-teaching. Such learning is in fact the unconscious acquisition.

In view of what has been said about teaching and learning, we arrive at this account of teaching. A teaching activity is that activity of the teacher, the intention of which is to bring about that learning in a pupil, the intention of which is to achieve some end state like knowing, appreciating, whose object is some belief, knowledge, attitude or habit. This logical dependence of teaching on learning, and of learning on the nature of the achievement to which it is directed is something very significant and vital, not just an academic matter. If teachers are not clear about what kind of achievements their teaching is aimed at, they cannot know what is involved in the pupil's learning of a habit, they cannot know what is involved in their teaching the pupils the habit. Thus, only if teachers know what is to be learnt and who is learning it, they can begin to be clear about teaching the pupil a skill. Just as a pupil does not simply learn, but must necessarily be learning a skill, so a teacher cannot simply teach, he must be teaching a pupil, and he must be teaching the pupil the skill. Thus, one necessarily teaches somebody something.

In an activity, is the intention to teach enough to categorize an activity as a teaching activity?

No, activity must possess some observable features in order to be called a teaching activity. Firstly, the specific teaching activity must indicate what is to be learnt. In other words, the teacher must make plain in his activity what he intends to be learnt, so that the pupil's learning activity can be directed to this as its object both by the teacher and the learner. It is for this reason that demonstrating, telling, and proving play a central part in teaching; these activities are clearly indicative of what is to be learnt. Again, it is for this reason that activities like sharpening a pencil, opening a window, or dusting a blackboard cannot be called teaching; they do not indicate by

themselves what is to be learnt. Secondly, the specific teaching activity meant for a particular pupil must clearly indicate that it is possible for the particular pupil to learn what is being taught. For instance, reading out passages from the Marxist philosophy to the six-year-olds may not constitute teaching at all, though to an undergraduate class it may constitute teaching. There is a gap between the knowledge, skills, or state of mind of the learner and what he is to learn, which any teaching activity must seek to bridge if it is to be called a teaching activity. This warrants that the teacher must have psychological and other knowledge about the learner.

Referring to the second criterion, it might be argued that even if the pupil has not learnt (though the teacher judged that pupil would be able to learn), the teacher's activity should be called a teaching activity, especially when the intention to bring about learning is there. The answer may be 'yes', especially when the teacher is teaching a group (a class), because the teacher is working with an appropriate norm for the attainments of that group which he has prejudged as being able to learn what he is teaching but which nevertheless is bound to have some individuals who do not come up to the norm.

Teaching methods must take care of these two criteria, and be based on what exactly is being taught and to whom.

Whereas, what is teaching activity now stands identified at least to an extent, what is good or successful teaching has not been touched in this chapter. Successful or good teaching, though difficult to discern, would seem to be simply teaching which does bring about the desired learning. But what characterizes good teaching has yet to be established.

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Teaching: An Unchanging Task

No Change

Significantly discernible are the changes occurring in every field of endeavour in this dynamic world of today, but teaching stands essentially unchanged. Teachers still teach much as they did in say the last three decades or so. Classroom practices have undergone no worthwhile transformation, and teaching routines remain unaffected in spite of warnings galore to improve schools and colleges. The causes of this deplorable tardiness are too deep-rooted to be eliminated so easily. It would therefore be essential to examine them more closely in a bid to effect some changes in teaching and in the process of education.

Why No Change

A teacher finds no clear-cut evidence of his effectiveness; cause lies in the nature of his work. No foolproof methods of gathering the consequences of his teaching are available. He fails to know of the precise extent to which students have learnt as a result of his teaching. The students may show gains in learning after they have been taught by him for a time period, but it is not possible to attribute the gains to him. Other factors may have operated simultaneously.

Having no satisfactory mode of measuring his performances by the results produced, he naturally resorts to guesses and sometimes fallacious inferences. He chooses a course of action in teaching from among the many courses of action available to him, thinking, though in fact blindly, that his choice would be most effective. He goes ahead and performs his task pursuing the course of action he chooses, but he at no stage of his progress gets a clear indication of whether he is performing correctly or effectively. In short he is groping in the dark.

In such formidable condition if teachers follow age-old practices and avoid innovations, it should not surprise any one. When he finds no way to determine that one method of working is better than another, the teacher tends to adhere to custom and tradition in teaching.

Resort to Side Lines

Consequent to this uncertainty the teacher's attitudes and conduct are imperceptibly affected. He is tempted to neglect teaching in favour of other activities which afford more positive proof of his effectiveness. Thus suffers teaching. When he finds that his superiors who report on his teaching are vulnerable to hypocrisy and flattery he is lured to attempt the needful in a bid to establish that his teaching is effective since he finds no other means of establishing it. He is hesitant to examine indirect evidence of his teaching effectiveness. He is impelled to observe routinised habits at the expense of good teaching.

Failing to establish a concrete proof of his competency, the teacher like a doctor or a lawyer is obliged to self-evaluate, chiefly on the basis of others' judgement as distinct from the carpenter or other skilled expert who knows his success by enjoying the product he himself manufactures. But whereas the success of a doctor is indicated by the patients' repeated calls and that of a lawyer by the clients' future bookings, it is not so in the case of a teacher. For the teacher his students' repeated visits to remove difficulties is a sign of the teacher's failure, not success.

The social evaluation of the teacher's work, as reflected in his salary, indicates that public approbation of his work is lacking. This reduces his worth, importance or dignity in the eyes of students who then tend to be indifferent while he attempts to educate them. Frustrations in the classroom compel the teacher to compensate. This he does by sideways, such as teaching private tuitions, staging theatrical show, or other school-related activities in which he gets ready recognition and a sense of concrete success. Sometimes he goes to the extent of making adventures in out-of-profession activities like business transactions, public engagements and part-time appointments with or without additional income. All these deviations and added honours may speak well of the teacher's personality and drive, but these certainly detract from his real job, his teaching errand, his instruction work. Resultantly instruction suffers, students

do not get the assistance they need and the teachers do no more than staggering on the rut.

Need of Good Evaluation

If teaching is to improve, the teacher must regularly be told explicitly and in no uncertain terms about the effectiveness of his efforts. This step alone can keep the significance of his task alive for him. Discouraged by the treatment society metes out to him, the teacher is likely to misconstrue all measures to appraise his work. He may regard the presence of an observer critic as a threat to his privacy. He may regard the rating of his performance by his headmaster as a step to demoralise him. He is apt to regard students' rating of his performance as a humiliating device. At the same time such attitudes of the teacher would hold back all the valuable information that could raise his effectiveness and build up his morale. Headmasters should create a favourable atmosphere and society should give the teacher assurances so as to avoid the development of such negative attitudes in the teacher.

The teacher's solicitude refrains him from necessary experimentation which is vital to improvement in teaching, and to dispense with traditional teaching practices in favour of novelties. His anxiety that if he attempts a different practice the results may not be so favourable frightens him; thus he dare not step out of the existing procedures which make him feel secure and smug. But he must gather courage and be enterprising enough to try and if successful adopt innovations. Failure in such trials need not lead to his self-disparagement. It should instead stimulate him to embark on more and different trials. This perhaps is the only sure way of bringing improvement and changes in teaching tasks.

Need to be More Resolute and Stable

The teacher's job is very exacting and demanding, in another sense that the number of students he has to contend with is fairly large, each student representing a unique pattern of habits, attitudes, interests, abilities, emotions some of which are in consonance with the academic requirements while some are at loggerheads with all that the school or the teacher has to offer. But the teacher is exposed to both individual and group relationships with this uncanny lot. To work effectively with all these he needs to be constantly stable, poised, tolerant and patient. If he is not so, he is always agog to

exercise a rigid code of conduct, lest someone might whisper that the teacher is too good to be able to enforce discipline. The teacher may sometimes work under the fear that students might rebel against his authority, if he has any. This makes him constantly anxious to enforce order in the class room. He curses, abuses and coerces the students. He uses the rod, threatens dire consequences "if you misbehave" and invokes punishments. This makes the school a field of conflicting forces rather than a temple of learning which the school claims to be.

Whatever the hazards, and thorns as contemplated above, there are teachers everywhere who devote their energies and attention to teaching without seeking any reward other than the inherent self-satisfaction and a sense of service. Nevertheless it would be a sheer mirage to think that teachers are a unique stock, noble and selfless, self-effacing and self-sacrificing whatever the provocations, rising above the normal human desires and weaknesses. In matters of professional service, teachers should not be expected to be in any way different from other professionals. As such their pecuniary rewards, amenities and status should match those of other professions.

Teachers Must Earn their Due

Notwithstanding what is denied to him, the teacher cannot have and is perhaps not entitled to the recognition and status he ought to have if he is content with poor standards of his performance. He must earn his due by proving what he can do, by giving without a shadow of doubt an evidence of his expertise, his integrity, his inspiring personality, his sharp acumen. Just as a trained doctor is expected to be superior, in his accomplishment, to a compounder or a midwife, a teacher is expected to be superior in his performance and outcomes to an intelligent layman, otherwise he forfeits his claim to professional standing. He must be willing to change his attitudes. He should make deliberate efforts to improve the quality of instruction. He must welcome all attempts to assess the effectiveness of teaching so as to distinguish good performance from a bad one. One of the major causes of sustained poor teaching performance has been an utter lack of clear-cut distinction between skilled performance and an unskilled one. Hence, the inevitable need of a good evaluation programme which perhaps is the only protector and benefactor of a good teacher. Without such programme, sham and inefficient teaching is sheltered and thus perpetuated, while good teaching equated with bad teaching stands victimised.

Poor teaching is the root-cause which leads to the decrying of teaching profession and to the understatement of values which the teachers always harangue. Rise in pay and other state measures to improve the teacher's lot at best provide better standards of social living. Administrators, mainly, would remind the teachers to raise educational standards. No one except the teacher himself can do anything to improve the teaching performance. As such, the teacher must assume direct obligation of improving the quality of teaching and of bringing some changes in it.

Good Teaching: A Dubious Concept

An old colleague who taught for nearly 30 years told me that teaching becomes boring after a few years. That set me thinking because I, having taught for over three decades, never felt that way. Perhaps teaching begins to grow boring when one has no sense of intellectual progress in one's own class — that, in fact, is the moment when the teacher himself ceases to learn from it. Teaching, as Samuel Johnson said of hanging, concentrates the mind wonderfully. Under the constraint of teaching a topic, one reads it with a great intensity. One not only makes sense of the topic for oneself and plans how best to orchestrate a discussion that will elucidate it for others, but also anticipate a variety of questions, sharp and obtuse, about it. Teaching also helps clarify one's own point of view on many issues. One cannot teach effectively unless one knows where one stands on fundamentals.

A teacher must, at all costs, see that he is not boring — or at least any more boring than is absolutely necessary. Teaching is, in a way, a performing art. But while one is under an obligation not to be boring, neither will it do to be too entertaining, nor merely interesting. A class is a captive audience, and the temptation sometimes arises, especially with those of us who are too flamboyant, or are perhaps academically inadequate, to work it the way a floor performer does. But we must be loyal to the subject and to the art of pedagogy. We must be entertaining, and interesting, always in the light of the subject being taught. Some of us do not have it in them to be entertaining. Others are excessively dramatic. What we need to demonstrate is how interesting a subject is.

If a teacher becomes known as a "popular" teacher, or rather a "too popular" teacher, he should perhaps suspect his work. How does one know that one has become too popular? Large class

enrolments for a subject may be one sign. Effusive praise on student evaluations or heralding a teacher as great by his powerful coterie may be another. Although it may seem callous to say so, students ought not like you too much – at any rate not very many of them. Universal popularity can indicate that one is too bland, not tough enough, or is inadequately vigorous in one's standards. Student evaluations of their teachers, researches reveal, are to be trusted warily. Most often, students assess a teacher solely by his likeableness; but being likeable and being an effective teacher are not at all the same thing.

In fact, the concept of good teaching is both dubious and elusive. Students may be able to tell if a teacher is a shirker, but one doubts their ability to know truly whether a teacher is good or bad. What makes good teaching? Getting the lesson across; teaching stirring us as it does; the seriousness, the grandeur, the majesty of the material that we get across to our students? Perhaps all these and much more. Much of the quality of our teaching depends upon the quality of our students. Five of six exceptionally bright minds in a class of 30 or 40 students sometimes raise the teaching morale skyhigh. But this situation, alas, especially these days, is rare. Yet there remains a sense in which teaching provides the best education – to the teacher himself. Even after several years of teaching you may rarely enter a class without feeling nervous nor emerge from one without feeling lightened. Do not sulk over it. You are a good teacher, though the debate on who is a good teacher proceeds apace.

Which lessons go home and remain with one through the years is something a student can know only much later and a teacher perhaps never. A teacher who seemed vociferous and boisterous, even a bit dull, when he was taking classes can ten years later seem decisive to a student's development and progress in life. Another teacher, who led a student to believe that the latter was imbibing abundant knowledge, can years later seem trifling. Teaching is too intangible to be judged easily. How much a teacher influences his students is best recollected and understood only in years to come – many many years perhaps until when the student becomes oblivious of the one or ones who contributed to carving him out and the teacher becomes too distant and detached to think of it.

Sometimes it so happens that after teaching two or three exhilarating classes in a row, the fourth will be dull if not dreary. Of course much

will depend on the kind of teaching one does – on the topic and the method. But in the end the feeling often remains that one has not been good enough. This self-doubt seems very much a part of the job of teaching. It tends to make one feel humble, but remember this humility is real, based as it is on a true sense of inadequacy.

One of the first things that a teacher should learn about teaching is that he is not to teach things for which he has hatred; though he tries to hide it, the hatred seeps out. Teach things you like, you consider important, you feel facility in communicating. Teaching can exhilarate as nothing else does, leaving one feeling that one is doing something extremely important. And when one is teaching well, one is in fact doing something extremely important. One is engaged in a continuing dialogue about the greatest and the most laudable things. One is passing on the tradition of learning or education that has shaped his own personality. The teacher feels that he is living with a purpose to his life or that teaching makes him feel most alive.

Teaching A Language

Among other things language plays an important part in developing successful individuals in a democracy. The greatest medium to satisfy one's own needs or those of others, language occupies a primary place amidst the things one must achieve for his self-realization. Among the various ways in which the human being is superior to other animals is his ability to use language to facilitate adjustment to his environment. What is more, this superior position of a man can be kept up only on the basis of the use and development of language. Being the most effective way of communicating with others it governs one's enhancing social relationships.

Language is not an end in itself; it is just a means to serve so many ends in the living world. It has no life in it except when it is in use by people. In fact it has no content. It is an activity of people; as such it should be taught as an activity rather than as a subject. It would be better taught through performance and practice than through the study of its structure and its forms.

Ever-Changing

Ever-changing in its quality and evergrowing in its vocabulary and meaning, language goes on transforming itself through the use it undergoes by succeeding generations and in different regions.

American English represents the most typical example of the fact that language must change. The fast, industrial and busy life in America and her developing civilization must tell upon all that comes in their way including the language which is the heart of the process. If language due to its rigidity and heaviness presents a block in a nation's march ahead — its growth in industry and human welfare — the block must be negotiated so as to make it supple and pliable for the progressive forces to forge their way ahead. Language must assist progress; as such it should be shaped and reshaped so as to become

palatable and convenient for all purposes. People are masters in the process of language, they change with the change of times, and hence the changes that we come across in the use or meaning of words, phrases and their structure. It is interesting to note that all the drill given by English teachers in the American schools has failed to change the usage of language by the American people who consequently make the same so called mistakes and yet they do not deem them as mistakes. It is in this way that American English has come into being. A glance over this English indicates simplicity, short-cuts, abbreviations and a practical approach to language. Perhaps America's pragmatic philosophy of life does the trick in the matter of language too.

Usage

It is a matter of common experience that certain words in all languages mean a little different, to people, from their meanings given in the dictionary. Usage which derives its sanction from a growing civilization goes a long way towards giving a word its meaning which is more apt and meaningful in a given set-up. Rules and structure may demand a certain modesty and surveillance from a language but popular usage demands self-gratification of the users. Since language is for use and is meant for the users, the latter triumph in determining what a word connotes most accurately.

Grammar is not the master of or the key to a language, as advocated by old grammarians. It only describes the way most people habitually use the language. In no way does it denote what is correct and what is wrong language. Grammar does not say that "owing to" is a preposition; as such it should not be used as a preposition. But most people use such a construction as a preposition and therefore it may be so classified. *On, with, in, to,* – words used to express the relations of a word to another word – are called prepositional words because of their functional use and not because of a decree issued by grammar. "The place I am visiting is where I would meet a friend" is a structure used by most people almost habitually. Still textbooks and grammar would not accept it as correct. It appears that grammars describe the past usage of a language and hence the fact that the current usage differs from the one described in grammar.

Place of Grammar

This, however, does not mean that grammar has no place in the

school. It is indispensable for a language and is extremely useful provided it is taught in a meaningful and practical way. Psychologically, the idea comes to our mind before its form; therefore grammatical structure should be incidental to the expression of ideas. Look at a student's composition, and point out his repeated errors in a mild and kindly way and in this way teach grammar incidentally. Teach grammar when the occasion arises and not otherwise, *i.e.*, when an error or a question arises or a situation demands. Children may be given the opportunity to hear and use correct forms of expression and they will conform to it. Hence the truth of "Good English is a matter of habit." Provide interesting language activities instead of eliminating errors as an end in itself.

It is yet to be seen whether effectiveness in spoken and written expression is due to a knowledge of grammar terms and rules. On the other hand, it is known from common experience that practice in using sentence-structures, words, or phrases in one's own sentences does contribute to abilities to write and to speak correctly and freely. Mugging up of rules, discussion of language and repeated drills at best enable the child to wriggle out of the rigmarole of the scholastic process or the examinations. Drill would do some good to the students if it is constructive *i.e.*, if the words drilled are synthesized with pupil's experience, if the students are facilitated by the practical use of the drilled words in putting across their ideas. Analysing the sentences of others to learn the use of words or structures, though useful, is not so productive.

When teaching the rules of sentence construction, it would be better to let the students observe and think over the meaning of the words they use instead of looking into the parts of a sentence as classified by grammar. If they are required to complete a sentence, let them read a group of words and see whether the sentence gives to them an impression of being a complete unit or that of being a disjointed and meaningless one, instead of trying to find the noun, verb, the subject and the predicate.

Development of Vocabulary

Similarly the student's experience with and use of the words, and not his cramming up of the definitions of words, leads to the development of his vocabulary. A learning experience that forms the background of a word adds the word to his working vocabulary. Words similar or related to the words should be then introduced.

Thus the students who understand Hamlet's feelings over the death of his father should be introduced to the words that describe the experience. In other words, the reading of this experience would make meaningful for them such words as stale, unweeded, heaven, frailty, discourse, dexterity, and incestuous, while a drill or exclusive learning of these words, unrelated to the context, would not be so fruitful.

Composition-writing warrants that there should be something to write about. Teacher should provide some first-hand experiences, both rich and varied, and clarify the students' needs before asking them to spin out a composition. Again, a good composition depends upon the quality of imitation, which the teacher can further and stimulate by citing good examples and encouraging wider reading.

Improvement in reading is a logical outcome of the will to improve. The teacher should, therefore, impress upon the importance of reading and provide continued instruction in reading.

Motivation and conditioning very much facilitate language development. Meaningful repetition, gratification of individual needs and managing successful performance would hence be the suitable teaching devices.

Distrust and hatred amongst people are generated by a 'misty' communication, 'iron-curtains', 'jamming' broadcasts and the like. Language teaching furthers international understanding.

Specific Aims

In order to let language serve us in all areas of education so as to make us competent and efficient in home life, personal growth, civic responsibility, vocational field and the like, some basic understandings must be taught to all students. This will be done if we as teachers keep before us a few specific, and yet vital, aims of teaching a language. Teachers from their experience in schools can then think of such learning experiences as would, when given to students, help them in achieving those aims.

To enable a person to establish his main contact with others is a goal of teaching languages. A learning experience to realize this aim may be to make students write out a dialogue or conversation round an argument with another person followed by a close analysis of the script to see how the improper choice or use of words or misunderstanding of the language lead to trouble. What were the

words or phrases which were vague or had emotional tinge responsible for clouding the issue and confusing the participants, and how, alternative, but more appropriate, words or phrases would lead to interesting and a befitting conversation. Mock parliaments, discussion groups, one-act plays, and other class situations which train the students in dealing with social phenomena gracefully with the help of the language are some other means to achieve the same aim. Let students indulge in the usual activities which involve the use of language – post-dinner talks, debates involving clash of opinion etc. – let them know how incorrect use of language confounds the forum and let them evolve a way of verbal or written expression of the day-to-day activities. A few years of this practical and motivated experience in the use of language are bound to make the student imbibe some of the semantics of language.

To develop the students' ability to use language for the purposes of discerning and interpreting their personal problems and their inter-relationships is another aim of teaching languages. When a student describes an experience in writing or thinks through the feelings accompanying the experience he gets a real understanding of it. Encourage a boy to pen down a few lines on a hockey match, on air-travelling or an excursion; he will come out with the value he derived from that particular experience. Ask him to build up a short story of his personal problems; he will project his problems in his account which will help him to understand his problems more clearly.

To enable the students to learn the language skills, which are essentially required to satisfy their personal and social needs, is the third aim that must be looked into by the language teachers. We get the students to write an essay, to correct the given wrong sentences, to change the voice from active to passive or to speak formally for five minutes. Have we ever thought that such activities are rarely called for amongst people's normal activities which involve the use of language? How many times, if ever, do we in adulthood need to write an essay or to make a formal speech? Let us, therefore, think of those language activities which would make students more competent, and efficient in their day-to-day lives. Conversation is a very important oral skill which all of us need on frequent occasions. Teachers can help students considerably in learning this skill. They can advise the latter to study literary conversation and grasp the points which make it interesting. Children's literature and some fiction would also be

useful in learning the art of conversation. Students may be asked to read a playlet, a film-story or the details of an historical event and present a talk about it before the class. Writing letters and brief reports on wide and varied issues is another skill worthy of our attention. Encourage the students to write letters (to their parents), and reports (to be read before the class) on their achievement in some field, seeking or giving information on a subject, event or a device, and narrating the proceedings of a debate, or giving an account of an educational tour. The ability to discuss issues is also an essential skill especially in a democratic social order where public opinion and mutual exchange of thoughts, feelings and actions are paramount. This can be encouraged by providing the child opportunities to criticize issues and matters pertaining to his field of interest, to listen to or sustain others' points of view with patience and sobriety, to take up the job of preparing his points of discussion and to be able to change his viewpoint when convinced. To speak is another important need training for which must in no case be ignored by the language teacher. Discussing literary characters, principles of grammar and essay-topics would train the child to speak as well as understand and appreciate literature. To collect information from wide and varied sources is another skill. This may be developed by asking the child to consult library books to find an answer to a question, to compile material for an assignment, to meet old students to find out the traditions and activities of the school. Similarly training in collective discussion can be provided by organising activities club, hobbies, clubs etc., where pupils can discuss their new ventures, interesting experiences and new books or pictures.

To enable the students to understand the value of the present-day passive agencies of education like the radio and movies is another aim worthy of achievement. It is essentially the language teacher's task to help the student make an intelligent and productive use of the information given out by such agencies.

To develop in the student (i) a will or attitude for independent study of literature, (ii) an ability to appreciate, compare and contrast good literature especially poetry, (iii) precision and fluency in the use of words and phrases, (iv) an insight into the work outside, (v) an ability to consult reference books etc., may be some other aims of teaching languages. Teachers from their own experience can as well think of a multitude of learning experiences which will aid them in the achievement of these aims.

The thoughts and finds of past generations merge into those of the present ones, the experiences of one nation are shared by the other nations at one time, views of great men are given practical shape – all through the use of language. Human personality itself depends a good deal on language development. Perhaps it would not have unfolded itself had there been no language to work through. From the 'birth cry' to his mortal finale man's activity of 'vocalization' remains supreme and all-powerful. From almost unintelligible baby prattle when he babbles incomprehensible jargon, he advances towards a high level of lucid, precise, forceful and effective exposition. This thorny process can be softened and eased by instruction in language.

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Teaching Internationalism

Today the centuries old boundaries of nationalism are exposed to an international atmosphere which warrants that there should be mutual understanding and good-will to each other to maintain lasting world peace. That nations should be friendly and well-adjusted to one another is considered vital, owing to the possibility of assistance and support of one nation to another in the fields of knowledge and material achievements. The Second World War, its horrible aftermath and the present competitive race for nuclear weapons have caused mistrust and tension amongst nations, thus necessitating the desirability of improvement in human relationships. Personal stresses caused by desperate needs added to those caused by social or community problems of the atomic age, are a serious challenge to the mental health of an individual, who is consequently in danger of finding the present intricate world as a big, blooming, buzzing confusion.

A person brought up and educated without reference to this new eager hurrying world and its nerve-racking demands is probably unable to meet this challenge alone. Inter-mixture of nations may also result in a person having belief in various ideologies. A nation may forget its own values in trying to develop others, with the result that certain psychological, though irrational, forces make it look east or west. These are the forces which lead us to war or disturb international harmony. All these ills and human failings can be comfortably avoided, if a provision towards their prevention is made from the beginning of the child's growth.

Education is perhaps the panacea to all the ills and disorders. If education caters to the future need – that of making the child an international-minded and peace-loving individual – it has served its purpose. That nations should extend good-will to one another and that there should be peace all over the globe are the needs of a modern individual, which educational procedures must satisfy.

That the teacher is the pivot of education, a nerve-centre round whom the whole system of education revolves and from whom this system draws its inspiration and vital force, is an indubitable and a universally accepted fact. That the teacher can aid or hinder the child in his development into the type of personality envisaged above is undoubtedly true. Teachers do influence children in the latter's most impressionable years and have the knowledge to put proved principles into practice.

Foundations for Internationalism

"Since wars begin in the minds of men, it is in the minds of men that defences of peace must be constructed" – these words in the preamble of the constitution of the United Nations Educational, Scientific, and Cultural Organization advise us that only the training of minds along a desirable path would rule out the possibility of future wars. This training to be effective must start in the child's early age when his mind is in a plastic state. The medium which can have the greatest impact on the child's mind, for the purposes of this training, is his school, his education, his learning experiences and above all his teacher.

Sound foundations for a life of peace must be laid in early childhood. It is a matter of common experience that persons who are aggressive, suspicious and snobbish in their inter-relations to others cause *bavoc* when they attain positions of public responsibility. They are not psychologically disposed to preserve peace. Personally they do not favour war and are afraid of it as much as anyone else; but being psychologically maladjusted, their imperious need to exhibit their own importance inevitably results in conflicts. Being themselves power-hungry and intriguing, they only too easily conspire against others. An effort to inflate their own ego causes serious repercussions to their nation and antagonism to other nations.

The Broad Role of Education

That the seeds of war, owing to our instinct of aggression, are already in each of us is an admitted fact. Whether this instinct and its accompanying emotion may brew up into hostility against fellow-men and nations, or whether it may be utilized as a fight against poverty and as a struggle for the development of national resources to bring peace and prosperity, depends on how best this instinct has been trained and educated. Peace in our own minds may guarantee

peace around us much more than peace treaties, the so called peace pacts, manifestoes, and formal communiques. Teachers who suffer from a sense of insecurity and who in turn brutalize their pupils into undesirable behaviour are denied peace of mind and hence their war on pupils.

To ensure international brotherhood and peace, the child should have early emotional training for the purpose. This training starts with a mother's love and attachment, when she nurses her baby and satisfies his need to feel secure. It includes his social acceptance, his share in decisions concerning him, his option to make friends and to be accepted as a group member.

Three Aims

In order that the child becomes a good international and democratic citizen, our educational system and our teachers should try to achieve the following three broad aims:

(i) The child should be made to accept himself and recognize his dignity as an individual. If his impulsive behaviour is condemned and rebuked, he tends to under-rate himself and to doubt others of hating him. In case he is repeatedly meted out the same treatment, he withdraws into himself, regards every offer of friendship as false and every chance-happening as a conspiracy against him. On the other hand, if the child finds in himself something worthwhile to accept, he will not betray his need of support and assistance from others. He will then be well-set for co-operation with others.

(ii) The child should be made to identify himself with and to participate in a group. Companionship and fellowship breed goodwill towards others. A condemned and lonely child reacts contemptuously and is emotionally well-set for aggression. School children, in a study conducted in an American school, were asked to select the classmates they would prefer to be seated beside or to work with or to play with. It was found that about twenty-five per cent of the children were not chosen by any one. It is these rejected children who need the teacher's special attention towards the object of making them feel that they are liked and needed by their class-mates.

(iii) The child should be made to accept others who are in a way different from him. He should be made to respect differences. One from another caste, creed, religion, or nationality should be shown particular regard. We learn most from those who are different; as such we can find much to be liked in them. The child normally does

not reject those who have a different nationality or colour. But if the adult does it, the child may follow suit. The teacher should help pupils to recognize the good points and qualities in other children who are otherwise likely to be rejected simply because they are in a way different.

Social Reactions

The need of forming appropriate social reactions is equally important. The adolescent is in the no man's land of society. He is neither a child, nor an adult; as such, he should not be treated as either of them. He has a little of childhood and is trying to develop something of adulthood. International attitudes are carved out in adolescence. Preference for different religions, choice of a vocation and that of a friend, various political and other loyalties – all these appear at this age. In fact, it is here that he develops a philosophy of life. Adolescents in schools may learn a way of life conducive to international good-will and peace or one which may prove to be an antithesis of democratic practices. Half the group of 16-year old students, in an American school, were given some training in international affairs, while the other half were not so trained. A prominent change in the social attitudes of the trained group toward other nations and people was noticed. A teacher's talk may revolutionize the attitudes of adolescents who happen to receive those ideas for the first time. Adolescents are yet in the process of forming their viewpoints, and their minds are flexible and receptive to absorb everything new that they come across. A personal view about the world around is for the first time formed during adolescence. 'How this view shapes out' is mostly determined by the adolescent's companions. It is a matter of common observation that the adolescent develops his way of dressing, his way of talking and that of making merry from his group-mates. He may even ignore the way of life his parents and teachers advise, if it is different from the way of life adopted by his age-group. That is why gangs and adolescent groups working together form strong feelings, loyalties, values and group attachment.

Educational Measures

Education, if realistic and differentiated, forms and develops proper international attitude. In fact, the greater the education, generally speaking, the greater the international-mindedness. More

of schooling leads to more of interest in international affairs, because education is definitely more powerful than any other factor – economic, political or racial. It is well known that masses comprising of skilled or unskilled working classes – those who are denied much of general education – are the greatest exponents of their country's national identity and are not in favour of taking keen interest in affairs which do not conform to the policies and traditions of their own nation.

Many studies reveal that the people who are best informed and knowledgeable like peace and cooperation more than those not so well-equipped. Travel also widens outlook and encourages cooperation and interest in other people's welfare. Education abroad makes people have a broader and more international view of world affairs than education at home.

The educationist would perhaps take the following steps with profit to ensure the development of international goodwill and peace in children:

(a) Students in groups should be encouraged to travel far and wide within their own country and abroad. This will make them know new people and new lands and develop their interest in and sympathy for others. The U.N.O. may also sponsor the travel abroad and world festivals to give the young a sense of world-mindedness. The present-day move to encourage (i) farm-youths to visit farms across the border, (ii) University officials to meet their counterparts in other nations, (iii) children to participate in an Art activity meant for the children of all nations, (iv) educationists to see for themselves the educational systems of other countries, and the like are steps in the right direction. This makes a young person understand that people of his type or interest are available elsewhere also and that they and hence their country are close or similar to him and his country in many respects.

(b) The young should be made to feel that they not only belong to their own country but also to a world which is composed of many people like them and many small nations and countries like theirs. To do so, the United Nations should be given interesting and illustrative publicity connected with day-to-day international events. Exchange of students and teachers, international seminars and study visits need to be encouraged for promoting the cause of world society. Increased support from private and government agencies for these programmes is most desirable. Facilities for foreign students and

teachers in other countries should be increased, so that more and more of young people are induced to live for some time abroad and thus learn about the way of life of other people. Human material and human nature being the same everywhere, a young man from one country will find that he and his country are in many ways similar to his friends and the country he is in now, that their goals are more or less common, that their traditions and policies are aimed at the same ends and that they and their people would very much like to pursue peace policies. Exchanges, with political strings attached to them or even with implicit political motives, defeat their true purpose. Even if economic help is to be given through these exchanges, the assisting nations should, while doing so, give due regard to the susceptibilities and aspirations of the country to be assisted.

The study tour is another very effective method of developing international outlook. Travel serves as an initial causative to interest in others. Personal contacts abroad, group discussion and seminars under enlightened directors then widen the field of interest. What is learnt abroad is a stepping stone to increased interests in world affairs.

The young must make fair acquaintance with all the countries of the world. The subject teachers can legitimately manage it within the framework of their own subject-teaching. The history teacher can teach about another country through his references to its institutions, to its life, culture and religion. A languages teacher may do so by telling about the main languages obtaining in big countries; and a geography teacher can teach the major climatic regions of the world.

An American psychologist, Prof. E.C. Tolman, goes to the extent of suggesting a basic world-education, which may teach about the general organization of the world and its achievements against universal facts of disease and hunger – a world language, a world flag, a world currency and a world-military force.

It is therefore evident that a good deal of modification in our schools and educational procedures is necessary for laying the foundations of peace in the minds of those who will make the future world.

Education – An Essential Requisite to Peaceful Citizenship

That wars are more frequent and more disastrous these days

than ever before may be due to another fact that the present civilization does not provide any natural release for man's aggressive instinct. Hence, the need for finding ways and means of providing a substitute satisfaction to the aggressive instinct with which we are born. Sports, mountaineering and the like are some such means, but an essential method to achieve the same objective is education. Modern educational methods unconsciously influence growth and adaptation. Dr. Glover does not think "that war will ever be abolished, until we learn how to bring up children in a more reasonable and understanding way than we do at present." He feels that "the sooner our child specialists and headmasters are shocked into sky-fits, the better for our children." The family is another important influence on children. But family and school need to be integrated.

Herbert Read is of the view "that nothing less than a complete recasting or reorientation of our educational system can promote peace, and save mankind from annihilating wars;" he asked the educational reformers to "revise the curriculum, raise the school age, build new schools." He adds: "I mean a complete transformation of the method and aims of education."

The existing methods of education are meant to adapt the child to suit a competitive and divided society. The instinct of aggression is redirected against other children, in competitions for various achievements. Thus education develops distinctions.

Herbert Read suggests two determining principles as the fundamental aims of the education that ought to be – "Educate with reference to things" and "Educate to unite, not to divide." The two principles, considered together, according to him mean that "what a child can accomplish unaided in the control or manipulation of things is very limited; but he soon discovers, under wise guidance, that much more can be accomplished by cooperation and mutual aid." This is the same as what Plato and Rousseau had meant by saying "that education should flow through the senses, the limbs and muscles, and not primarily through the faculty of abstraction." "Keep the child dependent on things only." (Rousseau).

When a child's fantastic wishes cause physical hindrances or end in punishment as a result of his own actions, he learns what he will do, when the same situations recur. He should be made to abstain from erring without telling him openly that he should not err. Experience and not a legal rejoinder should do the job. This is how Rousseau proved his point that education consists less in precept than in practice.

Plato, the greatest of educators and a great moralist, worked out a system which better suits the present-day world. He stated that the love of others draws its inspiration from the physical and concrete world. He bases his system of education on the study of the arts like music, poetry, and dancing and at a higher stage of education, mathematics. Education through gymnastics, and through creative play of all kinds was also included. The aggressive urges latent in men would project, through this kind of education, into physical celebrations and dramatic wishfulness. Catharsis or the purging of emotions would take out aggression through wishful participation in tragedies. Thus, according to Plato: "Play is the prophylactic of war. In war, we do not find, and we shall never find, either any real play or any real education worth the name, and these are the things I count supremely serious for such creatures as ourselves. Hence, it is in peace in which each of us should spend his life and spend it best."

The Communists' well-known theory that war is serious work which ought to be well-discharged for the sake of peace belittles the efforts of educationists and the UNO to end wars. This theory is ill-conceived and outmoded.

Plato thought that conscription and an identical military training for boys and girls were steps in the right direction. But I am inclined to believe that universal military training is likely to develop the child's aggressive desires to a very large extent, and this may be mostly towards other people – people who in his view show even a slight antagonism towards his own nation in thought, word and deed. This training would make the child ready, in his own mind, to meet any eventuality that may arise, with force and war-mindedness. Nothing in education or early training should provide a fillip to the child's latent aggression, if a foundation for peace-mindedness is to be laid. A similar military training for girls is also unwarranted.

Are we going to make all creatures on earth hand-maids of the god of aggression? Shall we abolish from this earth all the signs of peace, tranquillity, and the finer elements of human life associated with women? Do we want women to forget that they, as heretofore, are the symbols of service, art, culture and things opposed to fighting and war? Shall we make them like the men, who in the history of all nations have been notorious for causing wars and bringing about destruction and misery on the face of this earth? If we do not want to bring about this holocaust, let us exclude little girls from the scheme of military training.

Rousseau's view is that "war only makes manifest events already determined by moral causes." Hence the moral causes of war must be avoided at all costs. Herbert Read sees no hope for the world until education is introduced as the most essential form of training. By moral education he means "not education by moral precept, but education by moral practice, which in effect means education by aesthetic discipline."

No single system of education is conducive to peace and international goodwill unless the teacher, who is the focal centre of every system, keeps these high objectives always before him and tries to orient his functioning in school accordingly.

Schools for International Understanding

Negligibly few are the school systems in the world, which have international understanding as one of their foremost aims. This is due to the very potent force of nationalism obtaining in almost all the countries. Perhaps educationists are afraid, lest education for international understanding should result in weakening national loyalties. All the same, small number of schools which have made considerable progress in this regard can, after some radical changes, profitably take up the task of such education.

Schooling for such education involves wide and varied first-hand experiences, under expert direction, in the classroom and in co-curricular activities. Emphasis on the emotional and intellectual aspects of learning, acquisition of knowledge and skills, and the development of attitudes are its essential requisites. It should be related to the material and human resources of the community, the nation and the world. The school should realize the importance of the parent-teacher relationship and seek the co-operation of parents and private agencies. It would do well to keep itself in close touch with the day-to-day research on child development. Some of the important schools which educate, to a certain extent, for international understanding are the International School in Geneva, the International School, Copenhagen, the Friends' School, Hobart, Tasmania, the Public Schools of Los Angeles, California, the Council for Education in World Citizenship, London, Shantiniketan, India, and the American University of Beirut, Lebanon.

Objectives

Firstly, the schools should present to children the ideal of a

world society. Teachers can find material for this purpose in the sayings of great religious leaders like Buddha, Confucius, Jesus and Mohammad, in the philosophical works of Socrates, Plato, Kant and Schweitzer, and in the U.N. Charter, the Constitution of the UNESCO and the Declaration of Human Rights. Secondly, a study of other lands and peoples, their cultures, art, literature, music etc. should be stressed. A comparative picture of other people, especially the basic similarities and differences between one country and another, should be presented. Thirdly, the students should be taught that all nations are dependent upon one another in the economic, religious, social and political fields, that the results are highly fruitful and productive when peoples co-operate and that they suffer when co-operation is not extended. Fourthly, the students should know the aims, organization, problems and progress of such world organizations as the United Nations and its various agencies.

The teacher should also enable the youth to examine their own national life in relation to the world and to see where they need to make changes to let other nations live in peace. Let the students associate themselves with other nations through exchanges of letters, children's drawings, and books. National Flags, stamps, songs and buildings of other countries are a few other sources of such association.

Critical thinking and open-mindedness are extremely essential for mutual understanding between nations. All that the school does to improve human relationships forms part of the training for international living.

Teacher's Task

The immediate task of an Indian teacher in the modern challenging times is to act as a responsible adult for the welfare of the state and to serve the community with all his knowledge and ability. He will do so to form responsible public opinion needed to arrest the budding trends which might, if left unchecked, cause another war. Besides, they must increase their knowledge of the world's problems and of the new relationship of India to these problems in order to exert a positive and concrete influence for peace.

The next duty of the teacher is to educate the children properly in the next few years, when they would be growing up in a transitional and critical period of the nuclear age. The children have to comprehend the nature and complexity of the problems around them. They are to be trained in the art of critical evaluation that will later help them to

shape the public opinion required for the purpose of framing Government policies.

To attain World Federation, where there would be perfect peace and goodwill among all nations, is a slow and tardy process of evolution. Hence the need for starting our process of education, to that end, with the little children.

Teachers obviously have a greater responsibility than most of the other citizens for the cause of lasting peace. This is so, because of their special equipment of training and professional status and also because they happen to influence general action for peace for many years as leaders of the young. Teachers must help the young to survive and must arm them to make the best use of their survival. The teacher's potency for sowing the seeds of peace is thus enormous. But it should not be over-estimated. The press, the radio, and adult attitudes may work quite against the ideology envisaged by the teacher. All the same, we should not be disappointed. We as teachers cannot do everything, but we must do all that we can. What is most essential is that teachers should recognize the importance of and responsibility for educating the young for international understanding.

International understanding involves national understanding and a realistic approach to the world as it is. If our children are aware of the factors which shape our own national world, it would help them grasp the factors which compose the international world. National understanding and international understanding are therefore both complementary and supplementary.

No educational project whatsoever, of course, can revolutionize our thinking overnight. Long and fixed habits of thought, deep-rooted national prejudices and age-old behaviour patterns die very slowly. It will take time to establish new ideas and still more time to find desirable results. Nevertheless, the teacher's responsibility to do his best for maintaining peace will continue till a world at peace is established. Teachers must seriously initiate an educational programme to achieve the objective. To do so, they may have to revise the old curriculum and change many educational procedures.

The teacher's role is much more than what has been said above. The teacher has to play his part even outside the school. The immediate problem is that the adults of a community, with their baseless fears, old thinking habits and dihard character-traits are the principal dangers to world peace. It is upon them that the hope

of the world depends, and it is they who will control the destinies of mankind for the next few critical years. Teachers must influence these adults and build up a social conscience conducive to world peace. They should give the maximum support to organizations meant to achieve the aim.

A better and more effective teaching of social studies is another important obligation of the teacher. Bertrand Russell condemns history which is "so taught as to magnify that country; children learn to believe that their own country has always been in the right and almost always victorious, that it has produced almost all the great men." Teachers should also try to teach the qualities and attainments of groups and nations other than their own. They should make children understand that modern advances in every field of physical and social sciences are not the outcome of the genius of any one person or nation, but are those of the collective efforts of many.

The teacher must enable children to distinguish fact from propaganda and to use reason rather than force. Methods of discussion can round off the pupil's angularities formed earlier by crooked sermons of their old-fashioned parents or associates.

The teaching of science should lay more emphasis on the use of nuclear energy and the like for constructive rather than destructive purposes.

The primary school should look to the successful growth of the child in all the four ways – physically, intellectually, emotionally and socially – and not to his intellectual training alone. Regard for an individual's unique personality and hence the need to watch his distinct pattern of growth are the teacher's essential obligations.

The teacher's investigations into the interests and needs of pupils at different maturity levels will tell him about the time at which important concept can best be learnt.

There is nothing in human nature which makes war unavoidable. Moreover, education is really capable of conditioning human nature to a peaceful world and discovering all the means of achieving it. A few leaders are unable to perform this difficult task. Besides the teachers, the home, the community, the press, the cinema, the radio, and the television are a few other vital forces for conditioning the will of the people.

It is through education that standards and values are developed, and knowledge and learning are supplied and consequently citizens,

who know the need for peace and their distinct role in attaining it, are prepared.

Educational Plan

The interests and problems of students must be recognized. This will reveal to the students the necessity of recognizing and tackling world problems. Co-operative planning among teachers so as to minimize isolated activity and to continue a professional study of the youth's problem is advisable.

Teachers should endeavour to modify the behaviour of children, as the latter are influenced by the environment. They should continue to be related to established organizations and institutions concerned with international understanding. Their activities should involve persons from all strata of the community in co-operative enterprises of an international nature.

Pupil-teacher planning, parent-teacher associations, use of communication media — all serve to provide information regarding the causation of human behaviour. Aids and materials on comparative ways of living, cultural values and the history of nations may also be effectively used.

Learning experiences that the teacher must provide to help students acquire international understanding matter a good deal. These vary from teacher to teacher, and from one group of pupils to another. Individual differences among teachers, pupils and other strata of society account for this variability. Every teacher adapts certain meaningful experiences which can be enlarged upon for greater understanding of the world situation. Secondly, how do they learn, what type of learning experiences in the field of international understanding the children he is teaching are ready for? Thirdly, what are their attitudes, have they already developed some experiences which give them a basis for or against international goodwill? Fourthly, what interests them, are they aware of something about the recent wars, how much or to what extent should the horrors of war be stressed in working with the children of a particular age-group of boys or of girls? When the individual teacher poses all these questions before him he will be able to meet the needs of the pupils he teaches.

To give an example of a learning experience to be given while teaching them about the atomic bomb would be as follows. Ask them to apply their findings from their study of Hiroshima to their own

city. A way to do this is to make them prepare two maps of the city in question and mark on one the signs of a supposed atom bomb explosion. The other map which represents the city before the bombardment may be plotted with hospitals, radio-stations, schools, parks, power stations, water works, etc. The areas of probable destruction may be charted on the first map with the help of pins, sketches, and the like. Keeping this map before him, the teacher will describe the details of probable damage in words and figures, and will discuss its likely effects upon those facets of social and economic life with which the pupils are most familiar.

This map can be superimposed by the pupils upon a wall map of the surrounding area. The wall-map shows the types of agriculture, manufacture etc., which are associated with markets, banks, factories etc., in the city. The probable results of the destruction will then be discussed by the group and concretized into figures and charts. Skits like "life after the bombardment" by a group of pupils may show pupils' opinions: Cartoons, sketches, poems etc. may also be presented by the pupils. The deliberations of this learning experience may vary, depending upon the age and the previous assets of the learners.

Training Teachers and Peace

The training institutions have a great responsibility as the emotions and attitudes of the trainee teachers are more readily influenced than those of in-service-teachers. The following methods have been recommended by a UNESCO group:

(i) Soon after the start of the training class, the training institution should make a study of the attitudes of trainees towards other races and cultures in order to determine for each trainee the degree of training in international understanding needed. The UNESCO can extend a helping hand towards such an investigation.

(ii) The staff members should be sent for study and travel in other countries, and teacher exchange programmes practised. Similarly, inter-school visits and exchange of students if possible and acquaintance with local people belonging to other races and religions should be encouraged. Foreign students should not be encouraged to live in groups of their own. They should mix freely with the local students.

(iii) A programme of instruction designed to promote international understanding should be chalked out and should be taught by only those staff members who are staunch believers in the necessity of better international understanding.

Philosophy, psychology, the history of education, comparative education and social studies which are the usual subjects in any training course are the media through which international goodwill can best be developed. It is the method of approaching the subject which matters.

The Science, Art and Music teachers must indicate contributions made by persons of other nations, showing that science, art and music are international.

(iv) Audio-visual aids should be made use of. The UNESCO can help in the free exchange of educational films and film-strips and of radio transmitters. A special course to deal with the U.N. and its special agencies may be provided. UNESCO publications for students, and teachers' use must be sent to every training institution for this purpose.

(v) Trainees should be made to participate actively and freely in assemblies, clubs and associations. Let them manage their own clubs and control their own wards. The principal's or his staff's anxiety that they will not be able to put up a good show when play is required to be held, that they will not be successful in managing their day-to-day events and that they are not capable of doing the right thing without external control, does not reflect anything but their own past compulsively – autocratic attitude and a know-all belief that they alone can guide the trainees in everything. It is the experience of many teachers that students can do such jobs equally well, if not better, if unsupervised by the staff. Staff advisers should be available for consultation only. Let the students make mistake and learn from them. The training and the confidence that they will eventually achieve are worth more than what they would have achieved under the close supervision of their teachers.

The Teachers thus trained will be a valuable asset to the country and will certainly contribute considerably to world peace and international goodwill and to keep up the banner of world peace.

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Parents — Most Important Teachers

A year-old baby girl spends much of her time in a room stocked with educational toys which her parents have chosen to educate her. Both parents set aside 40 minutes every day during which they teach her to recognize numbers, the alphabet and objects in pictures and expose her to a playgroup. Another one-year old boy spends most of his time roaming around the house playing with pets, pans, empty bottles, and whatever else he finds. Sometimes he follows his parents around as they perform their household chores asking them every now and then for help or to share his excitement over something he has found. Both his parents respond warmly and zealously, but they rarely can give him more than a few minutes of their exclusive attention.

Though both the girl and the boy are likely to develop into well-adjusted, competent preschool children, the boy may be more so because he is exposed to more effective parenting than the former — effective because his parents let him do or explore things on his own.

A great deal of important learning occurs during the first two to three years of life. Home is the first school and parents are the first and the most significant teachers. If parents are adequately prepared for their role as teachers, they can ensure their wards' superior academic achievement and happy adjustment in the coming years.

Some of the dos for parents in the child's beginning years are: Give children maximum opportunity for exploration by making your home as safe and accessible as possible. Remove delicate and dangerous articles from low shelves and cupboards, replacing them with old magazines, balls, cans and other playthings. Be nearby in the home to provide attention and aid as needed by children. Respond to them promptly, providing appropriate enthusiasm and

encouragement. Talk to them often. Try to understand what they are trying to do. Use words they understand but also add new words and related ideas. Provide new learning experiences such as letting them accompany you to the market or allowing them to help you wash clothes. Encourage activities in which they try to act as adults.

Some of the don'ts for parents are: Do not give in to the children's unreasonable demand. Do not permit socially unacceptable behaviour. Do not confine them for long periods. Do not let them depend on you so much that independent actions by them are excluded. Let them not resort to temper tantrums to attract your attention, *i.e.*, pay attention to them as and when they seek it. Do not avoid saying "no" when it is due. Do not always stop them from cluttering the house – it is a sign of a healthy and curious child. Do not be over-indulgent or overprotective. Do not bore your child. Do not bother if the child does not learn to count, talk or speak the alphabet early. Do not force toilet training. Do not spoil him by giving him the notion that the world was made just for him.

Parents tend to over-stress the importance of their child's spoken vocabulary. Though many well-developing children do not speak much until they are two years old, their capacity to understand simple words begins when they are between six and nine months old. So parents would be teaching their child a language if they, between these months, introduce new words by naming objects such as chair, table, radio, picture, and water tap and by talking back to the child when the latter points out to such objects in his own baby prattle. In homes where parents talk to their children frequently almost from birth onwards, the latter develop impressive linguistic abilities. When the child approaches his parents for assistance or to share his excitement over some discovery, the latter should use simple language to talk about and expand upon whatever topic he speaks on. This too would greatly enhance his vocabulary as also his verbal expression.

When children, during the second half of the first year, begin crawling and climbing, they make accidental falls, eat dangerous articles and cause serious mishaps leading to body-injuries. Many well-meaning parents react by restricting their children to a small but safe area and providing educational toys to keep the latter occupied. But in homes where, instead of restricting their children, parents redesign their homes making most of the living area safe for the newly mobile babies, the latter develop good intellectual abilities by

having access to a large, interesting, learning environment in which they experiment with and explore a whole world of exciting and enriching objects at their own will.

Social skills also develop during the first three years. Children do not come civilized, nor do they acquire common courtesies on their own. Many parents hesitate to crack down on unacceptable behaviour, fearing they might lose the child's love. They need not be that afraid. Instead, they should set realistic but firm limits on behaviour before their child's first birthday, especially during the normal period of "negativism" between 16 and 25 months of age, when most children's demands are for whatever they could get away with by fair means or foul. Parents at this stage must let their children know in no uncertain terms that other people had rights too.

Thus, parents can make the greatest difference in the future academic prospects of tiny tots if they reach them during the first two to three years, when the foundations for later development are laid. Since parents have the greatest influence on their child's life during this period, they are his or her first and most important teachers.

Training Teachers to Meet Adolescent Problems

Need of re-orienting Teacher-Training Programmes

The plethora of research in the past few decades has brought to light many adolescent problems that a secondary school teacher has got to face. The rich literature available on adolescence reveals the factors, which cause such problems and the ways a teacher can help adolescents meet those problems. It also throws some workable feelers to the teacher to suggest the modes of day-to-day assistance that he can and must provide to adolescents. But the teacher generally comes across all such knowledge as a result of his own initiative at the time he is face to face with adolescent problems or at best in the course of his inservice training. Both these avenues fail to equip him effectively with the techniques of gearing to adolescent needs and helping adolescents resolve their difficulties. Perhaps a suitable reorientation of the teacher training programme could do the trick better. His training for the future task lays the basis of teacher's pattern of working with the youth, his attitudes towards them, his understanding of their problems, and his will to guide them properly. A provision to prepare the teacher, for helping adolescents meet their problems, must therefore be made in the teacher training programme itself so that he becomes competent to face the impending ordeal the way he is competent to deliver a lesson. That the secondary teacher is to educate adolescents and that adolescents have problems are admitted facts. The secondary teacher must therefore be trained to meet adolescent problems – nay, he should be selected for the training only if he possess the qualities potential to grasp such training.

Selective Admission for Teacher-Trainees

Firstly, admission to teacher training programme should be highly selective. Intellectual and educational maturity alone should not be the sole criterion of screening; social and emotional maturity should be an equal or even greater basis for it; how far the would-be teacher can further develop his emotional and social aspects must also be assessed. This seems more pertinent because of the well-known fact that identification plays a very important part in socialization and learning. The child learns to adopt the manners, language, gait and values of the people who are emotionally close to him and are significant persons for him. It is the teacher to whom he is drawn emotionally and who having prestige value for the child is a significant person. Consequently he greatly imitates the teacher. He learns more from example than from precept. For him and many other children a teacher, besides being teacher in the formal and mechanical sense of giving instruction to them, is a model liable to be constantly imitated.

Development of Teachers

After suitable candidates have been selected, the teacher training programme should, besides other targets, aim at helping the potential teacher in his personality development and self-understanding. This can be done by teaching of sociology, psychology and other allied subjects supplemented by practical or functional experiences in such subjects. Provision of guidance, informal social life and cocurricular activities facilitates the process. The trainees need to get group experiences and to analyse group processes involved to ensure transfer of such training when they are in teaching jobs.

The teacher trainee must understand himself and his motivations. Then alone he can observe his own interaction with students and others objectively. There is ample evidence to suggest that, of the many causes which make children drop out of secondary schools, teacher is one cause. Teacher profoundly affects the way in which many children value themselves. "How does the teacher understand himself," "what are his ideas and values," and "how does he view himself" are therefore very important questions to be looked into. There is a close relationship between his attitude to himself and his attitude towards pupils. He can help his pupils in personal adjustment and in meeting other problems; he can help them to understand themselves only when he understands himself.

Knowledge of Adolescent Development

The training programme must include learning about adolescent development. Then alone a teacher can understand adolescents and their perceptions, their needs and the modes of satisfying these. Knowledge of adolescent development is not to be given through diverse teaching courses alone, but also through actual experiences – which should be carefully oriented and supervised – with adolescents and their problems. Such experiences should range from observation and participation to direct responsibility, as in practice-teaching on the part of the teacher-trainee. Let the teacher associate with adolescents in many different situations, both formal and informal including out-of-school situations. Let him make case-studies of individual pupils and groups, make hypotheses about pupil behaviour and then check these against other criteria to detect his errors. Let him be a trained observer who can just recognize an exceptional or a problem child.

Besides learning about adolescents' emotional and social needs, the teacher-trainee has to concern himself with their skill needs. If adolescents are not well-up in their academic work, many emotional and social problems crop up. In order that the teacher may be able to help the adolescents in any learning (subject-matter or skill), he must know how an individual learns. It is implied that he must have the knowledge of what he is attempting to teach. His first concern is not with what the subject-matter does to the child but with what the child does to the subject-matter. Starting, therefore, with a psychological approach to the child, he is to end with developing the child's new knowledge logically to the skill level so that the child has command of it. To accomplish this, the training programme must include imparting the knowledge of modes of individual learning and that of psychology of learning, and involve experiences on an action level. The trainee should be made competent to offer a psychological approach to the subject-matter and to help the adolescents inherit it properly.

Training in Effective Methods and Materials

The training programme needs to be rich in both content and methods of instruction. The content and methods should be properly integrated so that the prospective teacher does not err on the side of subject-matter or on that of method when he is in a teaching situation. It is in this context that the usual teacher-training curriculum comes under fire. In most cases the so-called education courses tend

to duplicate psychology courses when they teach about the adolescent rather than stress on how to socialize him. The courses need to be built upon what the trainees have learnt about human behaviour. Secondly, the trainees need to develop ingenious methods and materials. They need to be fully introduced to the material already existent; for this purpose the training institution should have a well-equipped materials-library.

The teacher teaches neither individuals nor subject-matter alone. He just helps the young learn something. How would he be able to do it? The training institution in trying to answer this important question should suitably organize its programme. It must train the trainee in the 'what' and 'how' of adolescents' learning. Then alone will the would-be teacher become more proficient in helping the adolescents meet their problems.

The Essential Needs of Teacher Trainees

For some years past the training Colleges have been accommodating very large number of trainees. They have been stretching their existing arrangements and devising ways to train more students than their plant will easily bear. Besides, the curriculum has been undergoing several changes, first to meet the situation arising from the swing in the balance of training and, more recently, to meet the need of uniformity in B.T. and B.Ed. syllabi.

Involved in these organizational and academic changes, it is conveniently forgotten that a college is essentially a community which achieves its goal not through its formal organisation and curriculum, but through the informal relationships between its members. It is the nature or quality of these relationships, especially between students and teachers, that finally determines the success of an institution as a place of higher learning. To ignore this matter would defeat the very purpose of training.

These relationships cannot be developed by a decree of the Principal or the Department; they grow when teachers and students approach one another with the right attitudes. Students have certain needs which crop up in respect of the demands of their courses, as also of the requirements of everyday life. If teachers attend to these needs, the personal relationships envisaged above are bound to develop.

The students' needs are varied, as they differ so much from one another. Just as a community thrives on the variety of personalities to be found among its members, a college blooms and flourishes owing to the versatility of its students and teachers. To cultivate differing personalities of students is an important task of the college. More than anything else, the college environment must be fertile enough to let each student use and develop his talents to the

maximum degree. Teachers have a chief role in creating such environment. If we do not perform our role in this regard and are always thinking of the academic efficiency of professional training, we might lead to the development of curricula and methods which constrain personality rather than unfold it.

What matters most is the quality of a teacher rather than the number of teachers in a college. A teacher in a training college should be one who can inspire confidence and respect not because of his so-called efficiency which can be cold and ruthless, but because of his lively habits and zeal, his interest for others' welfare, his sense of purpose and, above all, his willingness and sense of responsibility to raise the quality of professional service.

The need to feel independent is most important because its satisfaction guarantees adjustment. Financial dependence upon their parents, as also on their tutors in case of those who seek grants in aid from the school, is a big hindrance in the student's way to feel independent. If somehow this dependence – dole from parents or school which smacks of charity or of reward for past achievement – could give place to studentship for every student, students would feel independent at least in one very important aspect of life. They would regard their job as a paid occupation with a monthly salary sufficient for their maintenance. This will also encourage them to put in more effort and hard-work on pain of failure which means ouster from the salaried occupation.

To win social acceptance in their own right is also necessary for them to feel independent. Their resistance to all forms of external authority does not let them get socially accepted. This resistance, characteristic of adolescent level, is natural and should cause us no alarm even if we claim to have introduced a very enlightened and democratic administration. To consult the students or to seek their opinions so as to listen to and accommodate their voice in administrative matters, which vitally concern them, is what would make them feel accepted as individuals of significance.

Adjustment to the opposite sex, since most of the training colleges are co-educational, is another essential need. Young men and women approach one another in a somewhat romantic and sensitive manner, this approach being a step in the process of their maturation. Being adolescents, they have not yet mastered the art of controlling an emotional life which works at the extremes of depression and elation. Most of the students manage to deal with this at the

normal level and establish healthy relationships which aid them to mature. There are some who pass through many conflicts and upsets which take away a good deal of their time and energy. There are students who need our attention, sympathy and understanding. We must help them to establish healthy, stable relationships with the opposite sex, as these relationships are a vital step toward the aim of recognized maturity.

These stresses and strains are associated with the very process of growth. Many of the students who show poor progress in academic work do so because of emotional difficulties and not because of intellectual slowness. These difficulties, though normal in adolescence, must be resolved quickly, if we wish to avert their serious consequences. College work demands above average intellectual capacity. Whereas an office boy may suffer through the normal depressions of adolescence without his work being affected, a college student cannot hold his work unaffected even if his emotional life is slightly disturbed, because his work requires complete resources of his mind. An unresolved emotional disturbance causes him anxiety and retards him in his work. Being left behind in work causes him more anxiety, making the situation worse. Thus we must give early and sympathetic treatment of all emotional or mental disturbances. All that is wanted is a sympathetic hearing of the problem by an understanding teacher whose judgement the student respects. But then college atmosphere must be so inviting and congenial that the student is able to seek any help without discomposure or fear.

Educational and vocational aspirations of the family have an important part to play in determining a student's standard of performance. A stimulating and alluring cultural environment in college can cushion these aspirations to the student's advantage. The student's drives, interests and ideals and his concern for the welfare of children can be used as a big incentive to achievement. An atmosphere conducive to learning and to attainment of high goals, and highest possible standards of scholarship set before the students by the teachers themselves can go a long way toward raising a student's level of performance.

Many students are thrown off their balance because of their inability to adjust to the free discipline of the training college. The conventional restraint and limited curricular obligations of the arts college, which they were used to during the preceding four years, are suddenly replaced for them by ample freedom and a long-drawn-

out schedule of work in the training college. The liberty to choose their own courses, their fields of activity, their own way of life, their own friends even from the members of the opposite sex, combined with growing sense of responsibility unto long and varying work, tend to make them nervous and confused.

Ready-made notes in the class and set amounts of homework to be completed at home both of which rendered him smug and contented and promised him success at the examination in his previous college-years are no longer available to him. He is given suggestions and references for self-study. He is given assignments to be attempted with self-effort and is required to initiate discussions and group work using his own knowledge and capacity to think. And yet there is no formal check to see whether he does all these. Final examination alone, or perhaps his eventual appointment as a teacher, might serve as a check to assess the nature and extent of all that he imbibed from his training *alma mater*. Formal work vitalized by informal learning and teaching techniques which cannot be absorbed without adequate practice present him with novel situations and incidents galore. He is confronted with a fascinating, though bewildering, life which must affect his achievement adversely. This explains why students with excellent record of achievement in their previous careers fail to live up to their promise. Most of the students are ill-prepared for life and professional work when they enter a training college. We must therefore help them to adjust to the new community they are in.

The professional course demands certain degree of achievement; community life offers exciting opportunities. The students need to be guided in how to strike a balance between the two. They need guidance in how to study, how to absorb most out of a lecture, how to study a book, how to prepare notes or how to collect information on a topic. An orientation course at the start of a session is not enough. Personal advice to each student from staff members would be of great benefit. Giving this advice is not an easy task. A disciplined tutor, who understands that a just sufficient advice and no more needs to be given, can perform this task.

Personal example of tutors will be of immense value to the students. Their diligence, integrity, respect for truth, humility etc. will inspire similar virtues in the students. Teachers must encourage students to adopt a critical approach to all they hear and read. Spoken word as is given by teachers and written word as is printed

in books must not be taken as a gospel truth. Let them argue, think and formulate their own conclusions. Let them ask questions or state their viewpoint. Let them interpret the available material and form their own judgements. This may involve face-to-face encounter between student and teacher, but it will work well if there is mutual respect and trust. Perhaps sound administration of the college is an essential pre-requisite to this situation. Authoritarian atmosphere in the college breeds distrust and suspicion. To create an atmosphere in which staff and students can work in cooperation with each other, we must trust in the students' capacity to behave responsibly and to show integrity. We must give them freedom to discipline their own lives and to make their own decisions. We should avoid imposing decisions and rules of wisdom on them. Let them develop their own initiative and ability to take decisions.

Such are the needs of the teacher trainees which we need to look into.

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Promoting Creative Teaching

Teaching a given class, a given subject with a given method year after year stagnates a teacher, his class, his subject as well as his method. A change in the instructional pattern, an innovation in his teaching, an experiment, a rethinking of the theory and practice of teaching, or a new model of teaching can revive the teacher, his class and his subject. The revival is, however, possible only when the teacher is creative. An environment in which the teacher can be creative and can improve his teaching has to be established. The principal has to encourage creativity in teachers rather than do administration alone. He should give up the task of observing what is going on and of bringing about conformity to the existing instructional programme. He has to lay emphasis on creativity to improve this programme.

Creative teaching stems from being dissatisfied with the results obtained from existing procedures, from the feeling that perfection is something never quite attained but constantly sought, from having new ideas, and from being willing to try the new ideas and evaluate the results obtained. Creativeness is in fact a constant state of experimentation. This experimentation involves planning, testing and revising. Thus a creative teacher has to be up and doing in his task.

Many teachers do not depart from the methods and the text with which they feel at home unless the principal helps them. They need courage to try new procedures. To promote creativeness in teachers, the principal has to help teachers obtain a clear sense of direction, to increase their willingness to try new procedures, and to give them greater security during the process of change.

Teachers' sense of direction can be made clear by associating them in the task of formulating the purposes of the school programme. Let them, along with the principal, examine the purposes of the

school and revise these purposes in terms of the basic values that the staff holds. Let them arrive at the common philosophy. This will make teachers more creative and encourage them to assume responsibility.

To increase the teachers' willingness to try new procedures, the principal is to provide a permissive atmosphere and a secure teacher-principal relationship besides removing the factors in the situation that encourage *conformity to a pattern*. If the principal believes that there is only one best method of teaching, teachers do their best to conform to that method and thus be in the good books of the principal. Instead, the principal must frankly admit that the best method for a given group of students is to be evolved in terms of the needs and personalities of the students and the limiting factors of the situation. He should believe that the best method of teaching for any individual teacher will be an adaptation of the basic laws of learning to his own personality and particular skills. An overt expression of such beliefs on the part of the principal will make teachers continue to experiment with a view to increasing their effectiveness. Financial or other material assistance that the teacher requires to try a new project should also be gladly provided.

When we want teachers to show creativeness, we must accept them as people who have ability, understanding, and adequate knowledge to provide the best type of learning experiences to their students. The principal should be receptive to the teachers' new ideas about teaching. He should encourage teachers to think, try, and evaluate for themselves, instead of imposing his own ideas and insisting to give his own answers. He should accept teachers' genuine and new opinions. This will promote self-reliance and teachers' willingness to advance new ideas which are basic to creativeness.

Many times, principals insist that the value of a new method should be proved before the method is tried. Whereas, this is an important function of a principal, it should not be carried to such an extreme that teachers find it easier to follow customary procedures than to attempt to convince the principal that something new is worth doing. The principal's question on the new method may aim at helping the teacher evaluate the worthwhileness of the method, not at getting the proof that satisfies the principal.

Giving teachers an idea that there is a model that should be emulated stifles creative teaching. Let teachers develop models that reflect the character of their work, the personality of their group, and their own best thinking.

When teachers' willingness to try new things is put into action, the principal must then give the security that makes any venture into new types of work satisfying.

Again, giving recognition to the people, who are trying new things, promotes creativeness. The recognition may consist of getting them tell the staff what they are trying to achieve and the results they are getting, allowing them to attend summer workshops on scholarships to develop new ways of working, and encouraging them to discuss new procedures with parent groups.

All members of the staff, not a few only, should be encouraged to experiment when they have an idea they want to test, as otherwise the status of those who are denied this privilege is jeopardized resulting in inter-staff jealousy and diminution of creative effort.

The difficulty in obtaining evidence of results which in the area of pupil growth are intangible, is a very big handicap that teachers feel as they attempt new things. We are accustomed to determining pupil progress by tests of subject-matter information. Other types of pupil growth are hardly tested. If, at all, attempts are made to measure other types of growth, they are viewed with suspicion. A principal can help his teachers feel more secure by working with them to develop types of evaluation procedures that can measure a wider variety of types of pupil growth. As teachers learn how to evaluate growth other than academic growth, they gather more confidence and freedom for attempting to develop newer methods of teaching that promote pupil growth.

Creativeness in teaching cannot be commanded. It can only be encouraged, and that too by such things as the principal's attitude, by removing unnecessary restrictions, by showing belief in the teacher's ability to make intelligent decisions, by providing a wide range of materials or the financial assistance to secure those materials.

Teaching is one field where creativity is sadly missing though greatly desired. If we desire that teaching should lead to real growth and development, if we want that teaching should bring desirable changes in the child, we much make teaching creative.

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VI

SOME EDUCATIONAL PROBLEMS

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A Void in High School Curriculum

No Orientation Toward Work

The fact that an astoundingly small number of high school leavers enter the portals of college and universities implies that a majority of the students after their secondary stage are exposed to the rigours of life which necessarily involve manipulation of suitable occupational or employment opportunities. But to our dismay and to their frustration these young scholars are too poorly equipped to forge their way ahead in the world of work; in case they somehow slip into an occupation, they do not enjoy the work because in them positive attitudes to work are not yet formed. Both these inadequacies of the youngsters owe their existence to a serious void in our high school programme. This void consists in lack of provision for imparting occupational information and vocational counselling to the students especially those who are not bound for colleges. Such provision in the high school curriculum is all the more important because our youth who are increasingly deviated towards white-collar jobs rather than manual work need to be taught that their occupation has to be suggested by their own assets and liabilities in relation to the community requirements and opportunities and not by a false aspiration or value they had been long cherishing.

Counselling not as a Separate Entity

No high school programme envisages teaching of occupations, their philosophy, or vocational system. The school leavers have consequently no idea of the various occupations that may be available or that of the ways to adopt one or the other of those occupations. They do not understand the sociological and economical implications of work and the influences these implications will have on their future. The youngster is perhaps left entirely to his own resources. He struggles, stumbles over the blocks in his ways and gets disappointed with life or overcomes the obstacles and drifts into what comes his way. By and large his entry in the work is accidental and not planned.

Guidance and counselling programme, another paraphernalia in vogue these days, might be expected to take care of vocational education and counselling with a view to planning the work-careers of students. But none of these programmes can do all that a classroom instruction can do, partly because our country can ill-afford the resources for speedy development of guidance bureaus and partly because classroom instruction, whether academic or occupational, is more natural and effective than extra-curricular courses.

Craze for College Education

Accidental drifts into jobs or frequent occupational frustrations make the young ones believe more strongly that higher the education, higher the job, and thus more money, more respect, greater status and so forth. They run after professions through the higher echelons of education and this explains the present craze for college or university education. Most of them are unaware of the disadvantages of these professions and of their own unsuitability for these. They do not try to know about such disadvantages nor are they made to know the same. They cannot imagine that low income, hard realities, or poor availability of the job they aim at or a personal handicap of their own for the job will mean a lot when they have grown to the cares of parenthood and family life. Occupational education in the school alone can stem the rising tide of such gropings in the dark.

High School's Job

The school needs to develop in the youth a more balanced perspective of occupational openings, their requirements and rewards.

It must emphasize the basic value that there is dignity in the individual and in the work he takes up. High school teacher, who is himself the product of college education, consciously or unwittingly, projects values and attitudes favouring prolonged educational career or college education. Since college education made him a teacher and may probably make him an officer in the Civil Services he tends to indicate in his off-the-cuff talks in the classroom that there is no dignity in work and life unless you go in for a university degree. Such attitudes are bound to mislead or at least confound the students who will not normally go up to college and especially those not endowed with potentialities to profit from higher education. The teacher himself needs to be more informed about the present market trends, demand and requirement for jobs and the ways he can help the students make proper choices. Teachers' own attitudes and predisposition towards work should not be reflected in their day-to-day dealings with the students.

The high school curriculum must include instruction on occupational information, vocational preparation, philosophy of work and the like with a view to educating the students in the what, why and how of work. Besides providing this equipment, the high school must enable the student to develop his "self-concept" which alone can make him assimilate and sustain the equipment. He should be able to make full use of his abilities and should regard himself worthy of responsible tasks. Where counselling as a guidance programme is available, there is a pressing need for its coordination with all that a classroom teacher may do, in this regard. Our high schools must do something to prepare the youth for the fulfilment of their vocational needs, as otherwise there are bound to be misfits and frustrated individuals in the society.

Examination: A Necessary Ritual

There are several rituals in the school or college that set the mood for a day, but an event that has deeper repercussions is the examination. As a rule the formal activities of the institution and such events as athletic meets, inaugurations, celebrations of days, and other ceremonies move along without engendering much emotion, but as soon as the word "examination" is cast into the social scene of the school or college, the mood typically changes. Tension and anxiety mount up. Worry sets in. An increasing bustle takes place as seats are laid, pencils sharpened and invigilators posted around. Smiles of encouragement and words of luck are flashed. The examination begins.

The human prayer "Judge me not", which is very much deep-rooted, is ingrained in examination. Therefore, the news that he or she is going to be examined sweeps the student off his feet. Since examinations test our achievement, we might do well to use the words "Achievement Tests" in place of the word examination which very naturally arouses fear in one's mind.

Examinations need not be traumas, but they tend to be so as they are interpreted and acted upon in a peculiar way. They become a disturbing experience not only to the pupils but also to the teacher, who has to reckon with the nervous actions of pupils. At whatever level, the examination is a task that must be not only softened but thoroughly tamed. Students must meet successes and overcome failure — such should be the rationale of examinations.

Mostly the examination schedule lasts a week or ten days, during which the test periods may range from two to three hours. Since examinations in various courses fall together, students and teachers may be subjected to several examinations a year. The formalization of examinations increases until the college level is reached. Thus, a student faces a critical period involving success or failure many times

during the four year college course. If the total number of examination periods for an entire educational career could be estimated, the total pressure, the nervous tension, the anxiety, would seem to be enormous. The situation is more severe on the college level, because there career possibilities are involved and future adjustment is at stake.

The assumption that the fear of examination makes learning certain does not withstand the shock of researches that show that the learner quickly forgets all that he learned by such fear after the examination is over. He does so because the purpose of collecting the information is to pass the examination. Educator must, therefore, make learners conscious of more important, long-term, remote purposes to enable them to keep the learnt material alive.

Examinations find out how a pupil's skills are developing -- be they knowledge skills, communicative, physical or appreciative skills. In some institutions such an objective may be realized. The formal examination has a tendency, in most institutions, not to be used as a diagnostic tool and a means of measuring progress. To the pupils it becomes a matter of competition and a way of mutual as well as self-evaluation.

Except in institutions oriented to a humanist philosophy which are rarely found, the success-failure syndrome of examination has become a reality. In spite of the well-meaning teacher's efforts to encourage a different point of view, the real and the educational point of view, this concept of examination has come to the fore.

Teachers may emphasize that examination is just a check on self-improvement, that it refers to the pupil's individual progress only without having any bearing upon his ranking with others, that his progress report shows his present evaluation in comparison to his own past achievement, and the like. But the evaluation of the child's progress is by some standard, which may be a scientifically derived norm or which may involve, and usually does, a self-other reference. The standard may thus be that of a high achiever in the class. In any case, however much the self-competition is stressed, the process takes place in a social situation. While the teacher may think only in terms of the degree of progress made by the child, the child, who may not even understand what the teacher is intending, will make the self *versus* other rating. He may, and almost always does, compare his progress with others. In this way the teacher's intention is subverted. The result of all rating may be the same -- the rating of children as good average, poor pupils by the teacher. This rating establishes a

reputation, and the child has to compete under a good or poor reputation. This self *versus* other competition pattern, to our consternation, becomes most prominent, however much we may try to minimize the competition factor in examinations.

Competing for success may spur an individual to greater achievement in simple situations, such as playing a game, working a punch press, adding up columns of numbers, or ticking every capital letter in a printed page. Whether such competitive testing produces similar result in the case of complicated intellectual problem-solving, involved in school or college examinations which put a premium upon speed, is debatable. In examinations, students develop all sorts of emotional blockages so that they do not function at their best. When examinations of two or three courses or papers follow in succession, as often happens in the college during an examination week, a student is exasperated, exhausted. To immediately shift from one field of knowledge and pour out another requires a flexibility and a power of concentration that most students do not have. The way the examinations are organized may guarantee failure, defeat of several students.

Since in this system of examination, success is the goal to be achieved through competition, all sorts of shortcuts are attempted to get ahead, *i.e.*, unethical means and means to facilitate cheating such as copying, stealing and bribing. All these actions are part of the success-failure-competition complex, a norm deviation which is duplicated in any area of life where competition is dominant. These actions in turn impart to examinations a crisis quality, the fear of getting caught and a certain corruption of character in the individual.

It is a sad commentary on our educational system that students spend their time trying to invent unholy ways and means of hitting at success rather than concentrating upon the content of their education. Conversely, teachers and administrators, instead of changing the system radically, spend their time trying to tinker with techniques of controlling the students' ways of cheating, *i.e.*, elaborate precautions such as moving with desks in such a way that no child could look at another's paper, the use of alternate seats, high powered flying squads, special instructions, threats of penalties and the like. Nevertheless, the problem has not changed no matter what has been tried. No threats or appeals to such subjective systems as honour system, fair-play work seem to remedy the malady. Obviously the change must be made in the system of examination.

Any programme of supervision of instruction must be concerned with the improvement of learning and teaching. But learning is not likely to improve very much unless we can evaluate it or know something precise about the pupil's status in learning – which is often termed as examination. Essentials of a good evaluation procedure are these:

1. We must state a workable philosophy of education. Each nation, each community, each school, each teacher has a philosophy of education. This is one's characteristic way of regarding education, its nature, purpose, and general desirability.
2. We must understand the true nature of learning. Education is a form of growth. When people learn, or acquire educational experience, they are changed in definite ways. Many of these changes are well known to us now. We can promote learning, measure it and know when it is occurring, and how the learner is changing.
3. We must be clear as to the objectives, in striving to attain which the learner makes progress. This progress we can measure. A test, therefore, must relate to the objectives of instruction if evaluation of learning is to mean anything. Acquisition of important information is one such objective.
4. We should state the objectives in terms of definite functions. The ability to apply principles to new situations may be one such function.
5. We must determine essential unit wholes. In general science, for example, oxidation is a meaningful whole. In arithmetic it may be division or subtraction.
6. We should develop techniques of observation, because adequate evaluation requires more than a mere study of a pupil's test paper. Even on a test paper the items of most concern to the teacher are not the correct ones but the incorrect ones. If an item is missed, we may discover the types of errors or difficulties involved.
7. We must provide adequate instruments of measurement, and use various kinds of tests such as speed tests, power tests, general survey tests, diagnostic tests, oral questioning, essay examinations, objective type tests and the like.
8. Every test must be valid in that it must discriminate those who have learned from those who have not.

9. The whole test should be reliable, and not too difficult to administer.

Examinations should be used as measures of achievement, devices for motivation, guides in learning, aids in teaching and bases for determining awards.

It may be concluded that learning is not evaluated merely for the purpose of giving each learner a mark of some kind or of comparing one student with another. Many purposes more worthy than those are there. Our pupils, our teachers, our society, have certain objectives expressed or implied. We need to use all available means to determine how well our schools and colleges are achieving these objectives. A good examination alone can accomplish this.

Education aims at the proper development of the student – development in all aspects of his personality. Examinations, Curricula, teaching techniques, books – are at best only the tools or means to achieve this aim. It is, therefore, imperative that these means are best developed and made use of for the sake of education. Whether the curriculum is suitable or the teaching technique is useful or the books are effective is known to the educator through the examination. In other words that education is doing well, or if not, where it requires modification is evident to us through examination and hence the vital role of examination to promote the cause of education. Examination, therefore, should be seen in the total context of the educational process and not as an end in itself.

When we say that education means the fullest development of the child's personality, examination, of one kind or another, must check up whether the development is taking or has taken place. Education will be blessed if it is serving its real purpose, as known through the results of the examination; it will be blamed if it is not doing so and exhorted to rise equal to the occasion. If examination is to play such an important and great part in the field of education, it must not be given so lightly as we do. It must be flawless from every point of view, so that it is efficient.

If the examination tests all that education caters to, it has served its purpose. If it does not, do away with such examination and introduce other techniques which serve education. We do not want examination for its own sake. The present educational system – with its examinations, syllabi, teaching techniques etc. – gives an unbridled impression that learning is nothing but rote memoriz. Among others,

the examination is perhaps most responsible for giving this impression. If rote memory comes most to the aid of the examinee in getting good marks, only memory will be used and trained, with the result that the students would do nothing except developing their memory while receiving education or while learning. Will it be called learning? I hope, not. The students will, in this way, not take care of learning in the real sense; teachers will not work hard nor will they try to improve their teaching techniques; no one will ever think of modifying the curriculum. It is in this sense that the methods of evaluation or the types of examination motivate both the student's method of study and the teacher's technique of teaching. Consequently education will defeat its very purpose.

No school or college can guarantee the effectiveness of its instructional schedule without a programme of efficient evaluation – you often call examination. It must know the changes that are taking place in the child. It must also know where the changes, though very much desired, are not occurring. As such examination is inevitably necessary.

College Hostel: Its Role in Education

College hostel which started as a students' home on the campus has over the years taken a nose-dive in its significance and respectability. Instituted to provide residence, meals, healthy educational atmosphere and adequate facilities for study, it played an important role in education. Physical exercise, games and sports, dramatics and other co-curricular activities in the hostel went a long way towards the student's allround developement. In fact it provided such programme of activities in the student's corporate life as would lead to his physical, moral, mental and social growth.

But who made the hostel a prime mover in its inmates' lives? It was the unerring and indefatigable superintendent or warden who was always on his toes to do his utmost unto the students. Unfortunately, however, his job has not caught the attention, it deserves, of the authorities that be. Whereas all jobs under the sun, including those of lecturers of the college whose hostel superintendent he happens to be, have undergone pay revisions galore in recent years, the superintendent's job continues to be neglected, even lost sight of, in the matter of raising its status which in our society goes with the raising of pay scales. Perhaps the acute importance of the job, as also the most heavy schedule of work, that a superintendent has to perform escaped the notice of high-ups. Consequently, there are no takers of this job. Rather those who are already esconsed in this position are perforce doing it because not doing it or doing it badly does not work, so vital is this job and so indispensable its obligations.

It may be worthwhile to trace the role that the hostel plays in education and the qualities that a hostel superintendent should be endowed with.

Life in a hostel, if regulated and organized, becomes a part of

educational process for the students. Traits like self-confidence, self-reliance, self-help and discipline that the students develop are due to the hostel where they are obliged to do certain tasks themselves, unlike in the home where parents do all the tasks for their children and where, therefore, the latter do not get many opportunities to develop the said traits. Rousseau, the great educator, said, "the lessons that boys get from each other in the playing fields and the hostel are a hundred times more useful to them than the lessons given in the school."

Modern thinking that the hostel should take the place of home has given rise to cottage system. Several cottages are built close to each other. Eight to twelve students live in a cottage which has a kitchen, a dining room; 2 to 3 big bed rooms, toilet and a bathroom. There is a cottage for the superintendent or warden nearby. This helps in the supervision of and guidance to students who feel more secure; feeling of a big family exists. Responsibility for managing each cottage, arranging meals, decorating it, cleanliness and all else is that of the inmates. Each cottage is under the supervision of a teacher, if some teachers happen to be on or near the campus; in such cases tutorial system can be started. Close relationship thus built between the hostlers and teachers has a very healthy influence on students.

Utility, tone and reputation of a hostel depends on its superintendent's personality, ability and acumen. He is the axis of the whole system. It is he who turns the immature student into a responsible individual, able to lead group life in a disciplined manner. If the principal deposes a teacher or two to help the superintendent, the latter's task becomes easier, yet more effective. The superintendent has to be vigilant so that no action or behaviour of a student escapes his notice. He has to be tactful so as to avoid resentment against authority. Like parents he has to advise, guide the students in need, thus winning their affection and respect. The students may open their hearts to him regarding their personal problems - this way the hostel becomes the home. The superintendent trains students to manage their affairs with others' cooperation and creates democratic environment in the hostel. Thus, the administration and organization of different activities of the hostel is in the students' hands. These activities take the form of mess committee, literary club, cultural society, sports committee, dispensary, all of which work independently under the superintendent's guidance.

The qualities that a hostel superintendent must possess are : (a)

administrative ability – tact, understanding, patience and being able to take decisions; (b) social quality – being sociable and capable of obtaining students' and teachers' cooperation; (c) personality – agreeable nature, bearing oneself with dignity in dealings, good example of cultured behaviour, meeting out justice tempered with sympathy, practical initiative and leadership in action, reputation of possessing character and high ideals; (d) human outlook – being broadminded, ability to understand human nature and human relations, liberal outlook, faith in students' ability and sincerity.

The volatile population the hostel superintendent has to reckon with makes his task all the more challenging. This population is that of adolescents who, because of the stresses-and-strains characteristic of their stage of development, are fairly difficult to deal with. An adolescent lies in no man's land of society in the sense that our society recognizes either children or adults, not adolescents. We treat the adolescent as a child; this treatment is naturally restrictive of his independence or initiative. Thus he is maltreated. Or we treat him as an adult and expect him to be mature and tolerant. This too is maltreatment as he does not come up to our expectations. The adolescent is neither a child nor an adult and yet he sometimes shows characteristics of approaching adulthood and sometimes those of the childhood left behind. It is, therefore, necessary that as hostel superintendent we thoroughly understand the characteristics of the adolescent and deal with him accordingly. It is his unique place in society which constitutes the problem. He has all the needs and ambitions of an adult, which we must take care of. If we ride roughshod over his desires, he rebels. If we treat him with understanding and sympathy, he responds and can be moulded. His troubles and conflicts, in fact, are directly proportional to the attitude of adults towards him. Adolescence is a delicate stage fraught with dangers of maladjustment and hence the need to tackle our hostlers, who invariably are adolescents, carefully and tactfully.

Some of the imperatives that a hostel superintendent must employ in relation to his wards are: have faith in them; show respect for one's personality; recognize individual differences; promote social living; allow them to take part in planning the programmes; use democratic procedures; appreciate individual talent; attend to individual needs; listen to them attentively; show loyalty and cooperation to the institution; establish high morale in your wards; inspire them; present a personal example of buoyant optimism,

eagerness for work and cordial interpersonal relations; be courteous; share their grief and distress; avoid emotional reactions, animosities and jealousies in your dealings; ensure the safety of the inmates, especially where it is a girls hostel, from undesirable elements of society and manage all their physical conveniences like good meals, sound sleep, healthy surroundings, leisure-time occupations, recreational activities, health examination, and medical care for minor ailments.

The services to be rendered by a college hostel being so numerous and varied, the hostel superintendent's job warrants tremendous amount of work and devotion. Hence the need to make this job at least as remunerative and prestigious as that of the teachers in the college fraternity to which the superintendent belongs.

Ten Plus Two and Economic Crusade

Simultaneous with the new economic programme, aimed at creating a revolution in the country's economic and social set-up and raising the nation's morale, came the Union Government's clarion call for 10+2 pattern of education. Whereas the economic programme aimed at making the country self-reliant and strong through multiplication of resources and production and annihilation of the forces of communalism, reaction, disruption, corruption and disorder, the new pattern of education promised to provide the wherewithal for bringing about the much-needed transformation.

Unlike the previous programmes which not unoftenly fell through for want of implementation partly owing to inbuilt flaws and partly due to lack of discipline and sincerity, the new economic programme couched in clear-cut and concrete steps provided a definite direction to the forces of progress and productivity and inspired all those saddled with the responsibility of implementing it to provide a breakthrough.

The new scheme of education received an enthusiastic welcome and a forceful fillip at the hands of educators who have since put it into operation.

No programme can survive or achieve its desired goals unless the person behind it can or does deliver the goods. It is he who will see a programme through. It is he who will create a revolution. Again it is he who can bring social change. And this person in the case of 10+2 pattern is the teacher or educator.

For some years past we had the feeling that things all around had gone topsy-turvy and that nothing could be done about it. We had reached a stage when the need for producing the man required to uplift the country and to work with a patriotic fervour seemed

intense. The ten plus two pattern which came in the wake of the economic programme, besides serving other laudable purposes, sought to produce, though in the long run, the man we needed. Whereas the Union Govt. presented to the nation this pattern for nipping the evils that beset the country then and for introducing a crash programme of reforms, the educationists at the helm of affairs recognized the vast potentialities of the new pattern for yielding the products in terms of such human beings as we need, as can touch new horizons of progress and production, as will reinforce the spirit of socialistic society, as will help form a secular democratic system, as will devastate the anti-social and anti-national forces of despair and destruction. Educationists all over the country reached the consensus that this pattern could provide a breakthrough, that it could bring about peaceful social change and that it would remould education for national development.

Whereas we stood in bad need of a national programme which could treat the existing ills and raise the country's level in all respects, we were crying for an educational programme that could meet and support the national programme. The new educational pattern came handy.

Ten plus two pattern attempts to link education with productivity which is one of the vital objectives of the economic programme. A comprehensive course of general education with provision for work experience will go a long way towards leading a large majority of youth to the world of work, the world of production and industry. These youths, who, heretofore, have been wasting their energies in purposeless pursuits including college education for which most of them were not fit, will go in for productive work. Thus this pattern of education can stimulate production in terms of improved irrigation, handloom development, liberalization of industries and the like. The +2 stage which provides vocational courses in polytechnics or workshops will help achieve another economic point by offering more jobs through apprenticeships, thus solving the perennial problem of unemployment.

Since the new scheme makes the secondary stage terminal for most of the youth, it will divert them towards occupations of various kinds. The youth would no longer make an army of indisciplined and frustrated groups who have no anchor and who often tend to destroy rather than construct things. They would no longer throng colleges and universities which provided them easy and comfortable

refuge earlier. Again, the + 2 stage by serving as a preparatory course for higher studies will lead only such students to the colleges and universities as are really fit for higher academic work and as will immensely benefit from it. This will, to a large extent, produce individuals who can fruitfully man various services in the private or public sector, who are really fit for their jobs and who can deliver the goods. Education thus would prepare the youths for their adult role in life.

The addition of mathematics and science to the existing curriculum for all will give students a general grounding that may stand them in good stead in today's world where these two subjects are playing an increasing role.

An undifferentiated course of general education for all, without any diversification of studies that the new pattern characterises, will promote harmonious development of students and help realize their intellectual capacities. Work experience, community service, health and physical education, and a multitude of other activities can lead to the fuller development of the physical, emotional and other aspects of the pupils' personality. The comprehensive syllabi, application of knowledge to day-to-day problems, functional content, project work in social sciences and practical work relevant to physical and social environment aim at turning the students into well-informed and superior citizens of a socialistic, secular, and democratic system that we are pledged to. The goals of national integration, training for democratic living, cultural and religious tolerance, which find emphasis in the courses of languages and social sciences and find ample scope in community service, are meant to impart training for democratic living. Stress laid on recent scientific, economic, technological and social developments in physical and social sciences makes educands forward looking; developments in other parts of the world put in proper perspective, and changes on the national scene receiving greater importance in the syllabi, broaden their outlook. Work experience provided in the new pattern is meant to make students productive and self-reliant. It inculcates right attitudes towards work as also the sense and dignity of work. Various activities of community service which include projects of village uplift, slum clearance, helping and nursing the sick and poor, attending to the families of factory employees, removal of illiteracy, instil in students a spirit of social service, moral training and altruistic interests. Cooperation with others, serving the needy, sharing one's

possessions with the community and social service will be the hallmarks of the products such education yields. This way education will, to some extent, contribute towards the uplift of the weaker and vulnerable sections of our society.

Thus, the 10 plus two scheme will produce individuals and groups who form a socialistic society that our constitution most rightly visualises. Several of the points in the economic programme such as workers' participation in industries, elimination of smuggling, removal of bonded labour, elimination of tax evasion, socialization of urban land, reasonable prices are the points that for their realization depend on the man. It is he who in one way or another is involved in these, whether he mans public service activities or whether he himself is indulging in such activities. All such individuals are the products of education. The new pattern of education promises to produce the man who is educated, trained and inspired in such a way as to desist from smuggling, and indulging in anti-national activities; rather he will never be tempted by such desires and will carry a strong and natural prejudice against such activities. Besides, his training will inspire him to eliminate such activities wherever they exist. It may take time to prepare the men required by the nation for its social and economic transformation and for treating its existing ills, which the new economic programme envisages, but that the new scheme of education will do it appears to be certain.

The success of the new pattern of education will largely depend upon teachers and educational authorities on whose shoulders lies the onus of implementing it. There is no substitute for hard work and self-sacrifice. No goal can be achieved, unless teachers work hard and move towards the new goals with a spirit of self-effacement, dedication and patriotism. It is a great challenge. Let us meet it with a will and determination. We are bound to succeed.

Learning – The Heart of Education

Learning is a complex process but at the same time it is a focus of all of our educational programmes. It can be made more simple, creative, effective and speedy with the concerted efforts of teachers and parents who facilitate the acquisition and sustaining of knowledge which leads to change and modification in one's behaviour. In a school or college situation, learning involves three or four things as follows:

1. *Learner himself*: Unless the learner is ready to learn no learning can take place.
2. *Teacher*: He is to manipulate the learning situation and to give the learning experiences.
3. *Climate*: It is in terms of teacher and groups of students which are there. A student in a class room itself is the very climate in which learning can take place. Philosophically, we say sometimes that the teacher cannot make the child learn. All that the teacher can do is to provide a situation which stimulates learning. There are also situations which retard learning. That is how the climate is considered to be important.

Cognitive Learning

It concerns the learning of certain concepts, the learning of certain generalisations *i.e.* what occurs besides the subject matter learning. The child learns many concepts even at the grown-up level. The college students learn many new concepts that may be of more complex nature, but for the learning of those concepts the teacher has to make up the learning unit in such a way that the new concept, which he is going to teach, grows out of the old concepts which the child is already aware of. At the same time the teacher has also to

associate this concept with a meaningful experience in the day-to-day life of the learner. Whatever the stage of the learner might be, for a child simple situation will do, and if the learner is a grown-up boy, naturally a complex situation will have to be provided. In order to teach a new concept, one has to go from simple to complex, and more than anything else, the learner has to be given an opportunity to express himself in relation to that concept. Even with regard to the theory of relativity, while teaching at a very high level the learner must be given an opportunity to express his concept through figure work, graphical work or in any way that seems handy to him.

The cognitive learning matures in the form of certain generalisations in the learner's mind. These generalisations may be that we provide the learner with a principle which explains several phenomena. For instance, to a small child we may talk of transport and then he might mention several avenues of transport. But the modern educator believes that instead of this deduction, the generalisation can be better grasped through induction. As we all know, in mathematical sciences, it is through the inductive method and through various empirical phenomena that we arrive at a principle. We happen to be in touch with several experiences in life and these experiences might be summed up in a single principle. The fact remains that whether we collect evidence for a principle or for certain facts which explain the principle, the generalisation follows the concept learning.

Attitudes and Values Learning

Besides subject learning, a very important part of learning is the learning of attitudes and values. Attitudes are learnt by the learners because of the situation. Attitude is nothing but a sort of group norms. Take the case of a boy who is in public school. He develops a particular attitude towards dress *i.e.* he identifies himself with the school, where dress is given a great importance and, therefore, he develops an attitude. The students in technical universities develop a very positive attitude towards research as compared to other universities. It is again because of identification of a sense of belonging to the university where this kind of attitude is emphasised, and where learning based on actual research is stressed upon.

The values are nothing but a sort of evaluative statements on the attitudes. We develop values from parents, from significant others, that is, all those people who, in our life, have great significance. And what we consider to be most important by way of our attitude is because we have value for that.

Skill Learning

Another type of learning is learning of skill. There are physical skills like those of drawing a map as a cartographer does or driving as a driver does. The non-physical skills are reading, writing, discussing things, dramatics etc. There are involved skills in the so-called interpersonal relations also. The child getting to know how to greet people, show particular type of etiquettes also involve a skill. There are more skills involved in our life than we are conscious of. Even in the academic learning, many skills are involved. The moment a learner picks up a skill, it means the ease and efficiency of doing a work is improved. A few factors involved in learning of skills are:

1. Demonstration
2. Experimentation
3. Feedback
4. Practice.

The demonstration by the teacher himself is important. Just as in the training colleges, for instance, a teacher or lecturer teaches a small class. Immediately after that, the student trainees teach a class which is the experimentation aspect of skill learning. The other thing involved in skill learning is the feedback. The trainee knows the results of his performance immediately after the experimentation. Lecturer and other students of his own provide information about his wrongs and rights. Then, with practice, the trainee improves his skill. For the learning of any skill, one must go through these four processes.

Functions of Learning

Learning functions in three ways *viz.* the acquiring of behaviour in a new situation, continuation of that behaviour and utilisation of that behaviour in various other situations. Take the case of a farmer who has learnt the use of a new implement. As a result of this change in skill, he adopts himself to the new situation and uses the implement wherever that is needed. He also utilises the acquired knowledge in the alternative use of that implement. Thus, this change in his behaviour is retained and utilised by him. We often say that a burnt child dreads the fire. But what has happened actually is that the child just touched the fire and withdrew his hand. That is the change in his behaviour and he retains that change in the sense that next time he would not touch a burning stick. But simply the retention of the

change in behaviour is not enough. It must be utilised in other situations *i.e.* he will not touch anything burning. At the grown-up level what happens is that we acquire knowledge and then we use that knowledge in our day-to-day life *i.e.* the adaptation, the first function of learning. And then, there is the selectivity of material. We select some thing, retain some thing and forget something. It is the second aspect of learning. The third is the utilisation; in other words, the transfer of knowledge from one subject to another, from one skill to another. It is in these three ways that the learning takes place.

Process of Learning

The process of learning is a process which has growth and develops by the very nature of the learnt behaviour. This process can become effective only if one takes care of certain aspects of this process. The first aspect is that of need. Learning starts when one is conscious of the need. Take the case of a boy who is conscious of getting a particular grade or division. As a result of this consciousness, he gets particular target before him and this target makes him start on learning. What, therefore, is required is that a teacher must help the child to bring his need into focus. If the child himself is involved in fixing his own goals, then the learning would certainly be more effective.

The readiness to learn is the second aspect worth consideration in effective learning. Certain parents think that by teaching reading and writing to their children at very early age, they would be able to make them big scholars. Such parents are living in a fool's paradise. It does not happen. There is such a thing as the readiness for acquiring a particular knowledge or particular skill. It has been revealed in studies that a child who was taught climbing skill at the readiness stage excelled the other child who underwent this training at the earlier age. The readiness is the result of one's physiological and psychological maturation. When a child attains the maturation and is provided with all the modern opportunities of learning, he is sure to excel everyone of those who started learning at an immature age. However some exceptions, which are very few of course, can never be ruled out. The teacher, therefore, has to go through a very complex task of assessing the child's readiness for different tasks before starting teaching and then, and only then, the learning would take place.

The third aspect is the learning situation. The home situation or a club situation or the school situation can be very much conducive to learning if the situation is moulded in a particular way. Take the case of one home, where there are educated people to discuss with the child. There, in it, is a library with newspapers. This situation is more conducive to learning. There is another home where the parents advise the child to keep reading and writing affair at school only, and no freedom of discussing the things with elders and no library facilities are available. Now this situation is least conducive to learning. A special situation found in public schools or better universities or better colleges is very much conducive to learning.

The last aspect of the process of learning is the interaction. When the child is ready to learn, is conscious of his needs and the situation is also provided, the child will start interaction in that situation which results into learning on his part. The moment there is no interaction by the student in the learning situation, no learning is going to take place whatsoever we might do. The more numerous and more satisfying the interactions are, the more effective the learning would be. The interaction, more precisely, is responding to a situation and getting feedback from it. For instance, there is a sort of reaction in a class room itself which shows that the learners are interacting in the situation when the teacher is teaching. It may be a physical reaction or some sort of tension in the body muscles usually observed from faces. It can be a verbal reaction as well, the interacting students may ask certain questions relevant to the topic under discussion. Similarly, a very enthusiastic response, an emotional reaction, can also be observed in the interacting students. The physical, emotional and verbal reactions are the indicators of interaction.

Conditions of Learning

In the complex process of learning, interaction is most important because as a result of interaction only the change in the behaviour will be brought about. The interaction or the learning takes place only if we observe certain conditions. And these conditions hold good in the learning of physical and non-physical skills, in the learning of knowledge and in almost all kinds of learning.

The first condition is the motivation itself. The consciousness of unknown need is an essential pre-requisite to learning. Motivation develops the needs or brings the needs into focus. The more

motivation a teacher does, the greater is the consciousness of the needs, more easier the fixation of targets and more smooth and effective would be the learning. A strong and continuous desire to learn develops only when one is highly motivated. The motivating skill can be one of the chief criteria for categorising a teacher as good or bad at teaching skill. Motivation develops in the child a strong desire to learn and makes him totally more receptive.

The psychological safety is the second condition in learning. In an atmosphere of threat, a child would absolutely have no desire to participate in a learning situation, to ask questions, to discuss, to make an observation or to make any bold gesture. An authoritarian teacher, for instance, can never inspire confidence amongst students because he deals in a situation where interaction is not possible as the child does not feel psychologically safe to participate in that activity. Not only the teacher, but the class-room itself and the students in the group, can also be sometimes held responsible for creating a psychological risk to a child. Most often it so happens that when a particular boy asks a question, the other students just persuade him to sit down or say to the teacher, "Sir, he is crank, do not bother about him". Now imagine, here is a situation where the students will not participate because the psychological safety is not there. A more permissive teacher would allow free and frank observation and would enable the children to discuss things on their own to ensure healthy interaction.

The experimentation by the learner *i.e.* doing things on his own, after he has learnt something, is another condition. After learning a concept, one must be given an opportunity to devise one's own methods of working and solving different problems. A farmer who has been told something about the new methods of farming or the working of new implements, might make alternative use of that knowledge in different situations. Thus, unless the child is made to do things on his own or implement those things on his own, it is impossible to make him learn.

Another condition is that of feedback *i.e.* knowing the results of ones own efforts. A learner, after he has learnt a poem, wants his other classmates to listen to his recitation and is curious to know about his performance. A number of experiments on two class-room situations have been conducted. For instance, in one situation, the practice was that of giving weekly tests to students and telling them the results, while in another situation, all the factors were controlled

and the tests were given but the papers and scripts were destroyed immediately after the results which were not told. When, after a lapse of six months time, both the classes were put to an objective type test, it was found that learning was more and the achievements were greater on the part of those who had been having feedback, that is those who were being told periodically about their performance as to how they were doing. This principle of feedback had been very much used to-day in the teaching machines where the student is shown the solution by pushing a button of a machine and the machine tells whether his answer is correct or not. Some of the sophisticated machines also tell as to why he is not correct. And some of the educationists consider machines for the purpose of feedback to be better than the teachers as there is no threat involved in the machines' telling. The teacher may slap a child with incorrect reply or would at least bring his own annoyance into action. In the present day programmed instruction much care is taken to ensure feedback.

And the last condition of learning is that of practice. The practice should never be disassociated from teaching. It is not a separate step altogether. We have to make our teaching in such a way that the practice is almost inbuilt. It must be interwoven in the child's conceptual system or conceptual learning. For instance, when we teach, in between we repeat the things, the questions are asked and the answers are given in order to repeat the matter over and over again. This is what we mean by the inbuilt system. Here the practice is very much implied with a great amount of reading. No one can become a good swimmer or a good typist or a good cartographer, until and unless one practise the things. Even if it is a skill of writing or reading, one is to practise it a great deal at the conceptual level. The teacher has to manage the things in such a way that this practice is inbuilt into the very system.

Other conditions of process of learning work in several ways. For instance, the theories explain learning. In modern times, learning is explained not through a single theory like the one mentioned under connectionism or under reinforcement or Gestalt. The learning is very complex because the human being himself neurologically is very complex. Thus, there are several ways in which learning takes place. And in order to accommodate those ways, the teacher has to resort to various methods of teaching. For instance, setting of certain goals as has been pointed out by Tolman's theory, is very essential.

In the modern times or to the modern human temperament, setting goals for learning has been one of the important tasks because the setting of goals is an essential pre-requisite to learning. Set goals require the use of certain methods for their achievement. At the earlier level, like the level of a child where reinforcement occurs, the methods are slightly different. Here one has to reward a child's efforts in one way or the other. So, the methods have to take a cue from the kind of learning which takes place at different levels.

A very surprising thing, one might say about learning, is that most of the experiments on learning have been made on animals and the rules derived from animal learning have been applied to human beings. There are several reasons for it. The very fact that the rules derived from animal learning have been applied with some modifications to human learning itself shows that the man belongs to the animal biological group. Moreover, it is always easier to work on animals in order to know the explanation to learning. We have to start with simpler organism where the process of learning is relatively simple. Therefore, for a learning theorist, naturally the rats or cats are more handy.

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